

JPRS-TEN-94-001

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JPRS Report

Environmental Issues

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KENYA

Moi Urges More Attention to Environmental Protection

EA0401174994 Nairobi Kenya Broadcasting Corporation Network in English 1300 GMT 4 Jan 94

[Excerpts] His Excellency President Daniel arap Moi today called for more efforts to be directed towards soil conservation and protection of water catchment areas throughout the country. President Moi observed that water levels in many rivers have been reduced as a result of land degradation and destruction of water catchment areas. The president noted that unless water was conserved all forms of life would perish, and added that it was a responsibility of everyone to conserve the natural resources.

He noted that environmental protection should be uppermost in the development agenda, from the locational to the district level and urged forest officers to emphasize it. He also called on agricultural extension officers to teach farmers how to dig bench terraces where the land was steep. The president further noted the wealth of the community depended on natural resources and hence there was a need to protect it. President Moi was speaking at various places when he made an extensive tour of southern and central Baringo. [passage omitted]

Noting that the country was facing food shortages, the president advised Kenyans to exercise a spirit of being mindful of each other, whereby those who have should help the others. He at the same time assured wananchi [citizens] that the government will do its best to see that no one goes without food. [passage omitted]

MOZAMBIQUE

Parliament Approves Resolution on Ozone Layer Protection

MB0812191093 Maputo Radio Mozambique Network in Portuguese 1730 GMT 8 Dec 93

[Text] In less than 30 minutes today, the deputies of the Assembly of the Republic approved a resolution ratifying the Vienna Convention on the protection of the ozone layer and the Montreal Protocol on substances which destroy the ozone layer, as well as the respective London and Copenhagen amendments. The deputies did not debate the resolution since it dealt with a very technical issue. On the draft electoral law, the deputies set up a 10-man commission to redraft a motion which must be approved tomorrow before the approval of the electoral law. Tomorrow the deputies will also examine the law on [words indistinct].

NIGERIA

UNDP To Fund Nationwide Pollution Control Plan

94WN0090A Lagos THE GUARDIAN in English
23 Aug 93 pp 17, 19

[Article by Paul Okunlola: "The Environment"]

[Text] Up to \$12.5 million (N275 million) is to be spent over the next five years by the United Nations Development Programme (UNDP) on the installation and adoption of environmentally sound strategies for managing dangerous toxic and hazardous wastes in Nigeria.

All the 30 states and Abuja, the Federal Capital, as well as seven Federal Ministries are to be involved in the implementation of the scheme, which is to commence next month.

The programme focused essentially on the development of an executive capacity for managing industrial pollution, which had been highlighted under Agenda 21, at the 1992 June summit of the United Nations Conference on Environment and Development (UNCED), as a major threat to the environment.

The principal sources of industrial pollution are petroleum and petro-chemical industries; manufacturing industries; and agricultural industries, particularly producers of pesticides.

Already, a two-member consultancy team has been rounding off preliminary work on the establishment of a programme outline that will involve the scope, priority areas and modalities for executing the programme.

The team comprised a New York-based environmental engineer, Mr Larry Quinn, who recently returned home, and a Nigerian specialist in pollution control and analytical chemistry, Professor Oladele Osibanjo.

The programme will, however, be executed and coordinated by the Federal Environmental Protection Agency (FEPA), with participation also being drawn from the Ministries of Petroleum Resources; Health and Human Resources; Industries; Water Resources and Agriculture; Mines, Power and Steel; and Transport, which should normally deal with marine pollution control.

"Right now, we do not have any marine pollution control. Ships dump anything on our shores and our oceans. We do not have the manpower, though, on paper, they have the responsibility," a source disclosed at the week-end.

Specifically, the programme will involve the training of a corps of pollution control managers in all the three tiers of government, who will monitor existing industries and prevent environmentally unfriendly industries from coming into the country.

Other aspects of the grant will comprise the supply of scientific and technological equipment towards equipping some of the ministries involved in the programme, training of the personnel to man them, and generation of some of the environmental data base required for the project.

The first two years will be used in training staff, but these people will now be used in generating data upon which future planning can be based.

Besides the staff development aspects of the consultancy schedule, the specialists were also expected to have drawn up a detailed outline of specific environmental control needs in the country.

Key areas of interest already highlighted for documentary review by the consultants are: Control of industrial pollution; management of agrochemicals; control of water

pollution; promotion of environmentally sound technology; and monitoring and assessing of the environment and natural resources.

The programme itself is a fallout of on-going efforts by the Nigerian Government to establish a comprehensive environmental management support scheme, to be funded both nationally and by donor agencies.

Following the outcome of a 1991 multi-sectoral needs assessment exercise, the issue of environmental management had topped the list of identified problem areas requiring support services.

These had included development of a programme of natural resources, soil and biodiversity conservation; combating drought and desertification, and stimulation of urban and community development schemes.

Aquatic Wildlife Protection Regulations

HK1412111093 Beijing NONGMIN RIBAO in Chinese
31 Oct 93 p 2

[“The Implementation Regulations for the Protection of Aquatic Wildlife of the PRC”]

[Text] **Order of the Ministry of Agriculture of the PRC**

“The Implementation Regulations for the Protection of Aquatic Wildlife of the PRC,” which were approved by the State Council on 17 September 1993, are now promulgated for implementation.

Minister Liu Jiang

5 October 1993

Chapter 1: General Principles

Article 1. The regulations are formulated in accordance with the Law for Protection of Wildlife of the PRC (hereinafter shortened to the Law for Protection of Wildlife).

Article 2. The aquatic wildlife referred to in these regulations refers to rare aquatic wild animals on the verge of extinction. The products of aquatic wildlife referred to refer to any part of the rare aquatic wild animals on the verge of extinction and their derivatives.

Article 3. The fishery administration of the State Council supervises the national administrative work of aquatic wildlife.

The fishery administrations of local people's governments at the county level or above supervise the administrative work in their own administrative areas.

The right of fishery administrations to impose administrative punishment stipulated by the Law for Protection of Wildlife and these Regulations can be exercised by their affiliated fishery administration and supervision agencies.

Article 4. People's governments above county level and their administrative units concerned should encourage and support scientific research institutions and teaching units concerned in carrying out research on aquatic wildlife.

Article 5. Fishery administrations and their affiliated fishery administration and supervision agencies have the right to supervise and inspect the implementation of the Regulations. The units and individuals inspected should be cooperative.

Chapter 2: Protection of Aquatic Wildlife

Article 6. The fishery administrations of the State Council and of the people's governments of provinces, autonomous regions and municipalities directly under the central government should regularly organize investigation of aquatic wildlife resources and set up resource files to provide a basis for the formulation of plans for the protection and development of aquatic wildlife and the formulation and revision of lists of aquatic wildlife under national and local major protection.

Article 7. Fishery administrations should organize various social forces to take effective measures to protect and

improve the living environment for aquatic wildlife and also to protect and increase the propagation of aquatic wildlife resources.

All units and individuals are forbidden to damage the waters, habitats and living conditions of aquatic wildlife under national and local major protection.

Article 8. All units and individuals have the right to report to local fishery administrations or their affiliated administration and supervision agencies acts of seizing or damaging aquatic wildlife resources and to accuse the wrongdoers.

Article 9. Any unit or individual that discovers aquatic wild animals which are wounded or stranded or which are trapped in inlets or river branches should report in a timely manner to the local fishery administration or its affiliated administration and supervision agencies so that they can take emergency measures to rescue the animals. They can also request nearby units with the requisite resources for rescue to take emergency measures and report to the fishery administration at the same time. Dead aquatic wild animals are to be handled appropriately by the fishery administration.

Aquatic wild animals caught by mistake during fishing operations should be released unconditionally.

Article 10. Application can be made to the fishery administration of the local people's government for compensation for damage caused by protecting aquatic wildlife under national and local major protection. The local government will provide compensation in accordance with the relevant provisions of the provincial, regional, or municipal people's government when the damage is proved to be true and merits compensation after investigation.

Article 11. The fishery administrations of the State Council and of the people's governments of provinces, autonomous regions and municipalities directly under the central government should designate nature reserves for aquatic wildlife in the major habitats and waters of aquatic wildlife under national and local major protection and propagate and strengthen protective management. Specific measures will be provided by the State Council separately.

Chapter 3: Administration of Aquatic Wildlife

Article 12. Catching and killing aquatic wildlife under national major protection is forbidden.

It is necessary to apply for a special permit for catching aquatic wildlife under national major protection when one of the following situations occurs:

1. Catching is necessary for scientific investigation of aquatic wildlife and aquatic wildlife resources.
2. It is necessary to obtain individuals of species from natural waters or habitats for taming and propagating aquatic wildlife under national major protection.
3. It is necessary to obtain aquatic wildlife under national major protection from natural waters or habitats to undertake scientific research projects above provincial level or medical production tasks assigned by the state.

4. It is necessary to obtain aquatic wildlife under national major protection from natural waters or habitats for propagation and popularization of knowledge about aquatic wildlife, teaching or exhibition.

5. It is necessary to obtain aquatic wildlife under national major protection due to other special circumstances.

Article 13. Procedure for application for special catch permits:

1. Anyone who needs to catch aquatic wildlife under first-class national major protection should apply to the fishery administration of the State Council for a special catch permit with the signed opinion of the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government where the applicant resides and where the catch site is located.

2. Anyone who needs to catch aquatic wildlife under second-class national major protection in their own province, autonomous region or municipality directly under the central government should apply to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government with the signed opinion of the fishery administration of the people's government of the county where the applicant resides.

3. Anyone who needs to catch aquatic wildlife under second-class national protection outside their own province, autonomous region or municipality directly under the central government should apply for a special catch permit to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government where the catch site is located with the signed opinion of the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government where the applicant resides or works.

Zoological gardens which need to catch aquatic wildlife under first-class national protection should be verified and approved by the construction administration of the State Council before they apply for special catch permits to the fishery administration of the State Council. Applicants need the verification and approval of the construction administration of the people's government of the province, autonomous region or municipality directly under the central government where their zoological gardens are located for the catching of aquatic wildlife under second-class national major protection before they apply for special catch permits to the fishery administration at the same level.

The administration in charge of issuing special catch permits should decide whether it approves an application within three months from the date of receiving it.

Article 14. Special permits are not issued when one of the following situations exists:

1. The applicants can obtain individuals of species and products of aquatic wildlife under national major protection or achieve their aims by legal, non-catch ways.

2. The application does not conform to relevant state regulations or the equipment or methods used or the time or location chosen for the catch are inappropriate.

3. The aquatic wildlife is not in a condition for catching.

Article 15. Units or individuals that have obtained special catch permits should catch according to the species, numbers, location, time limit, equipment, and methods of catch specified in the special catch permit to prevent accidental injury to aquatic wildlife or damage to its living environment. On completion of the catch, they should apply for inspection to the fishery administration of the county-level people's government where the catch site is located or its affiliated fishery administration supervision agency.

The fishery administration of the county-level people's government or its affiliated fishery administration supervision agency should supervise and inspect the activities of catching aquatic wildlife under national major protection in its administrative area and report the result of its supervision and inspection to the department concerned that approved the catch.

Article 16. Foreigners intending to engage in activities such as scientific investigation, sample collecting, filming or videotaping of aquatic wildlife within China's territory should apply to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government where the habitats of the aquatic wildlife under national major protection are located. After verification, the administration concerned will submit the application to the fishery administration of the State Council or its authorized unit for approval.

Article 17. It is necessary for those taming and propagating aquatic wildlife under first-class national protection to hold a permit for taming and propagating verified and issued by the fishery administration of the State Council. And it is necessary for those taming and propagating aquatic wildlife under second-class national protection to hold a permit for taming and propagating verified and issued by the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government.

Fishery administrations can entrust construction administrations at the same level with verifying and issuing permits for taming and propagating to zoological gardens taming and propagating aquatic wildlife under national major protection.

Article 18. The sale and purchase of aquatic wildlife under national major protection or its products are forbidden. It is necessary to apply to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government to sell, purchase or use aquatic wildlife under first-class national protection or its products for special purposes

such as scientific research, taming, propagation or exhibition. The fishery administration will submit the application to the fishery administration of the State Council for approval after it writes and signs its opinion. It is necessary to apply to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government and obtain its approval for the sale, purchase or use of aquatic wildlife under second-class national protection or its products.

Article 19. Fishery administrations and industrial and commercial administrations of the people's governments above county levels should establish a supervision and inspection system for the operation and utilization of aquatic wildlife and its products and strengthen the supervision and management of the operation and utilization of aquatic wildlife and its products.

That aquatic wildlife and its products which enters trade fairs is supervised and managed by the industrial and commercial administration, while the fishery administration assists. Business concerning aquatic wildlife and its products run outside trade fairs is supervised and managed by the fishery administration, the industrial and commercial administration or their authorized unit.

Article 20. Those transporting or taking aquatic wildlife or its products out of the country should apply to the fishery administration of the county people's government for approval with the special catch permit or the permit for taming and propagation they hold. The county fishery administration will submit their application for approval to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government or its authorized unit. For zoological gardens which need to transport aquatic wildlife under national major protection to each other for propagation, the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government can authorize the construction administration at the same level to verify and approve their applications.

Article 21. Communications, railroad and civil aviation enterprises as well as postal services should not undertake the transport or accept the sending of aquatic wildlife or its products without a legal transport certificate, and should report the matter to the department concerned.

Article 22. It is necessary to apply to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government for introducing aquatic wildlife from abroad. The fishery administration of the people's government above provincial level will submit the application to the fishery administration of the State Council for approval after it assigns a particular scientific institution to establish scientific proof of the necessity of the introduction.

Article 23. For the export of aquatic wildlife under national major protection or its products and the import and export of aquatic wildlife which is restricted by the international convention of which China is a member or

its products it is necessary to apply to the fishery administration of the people's government of the province, autonomous region or municipality directly under the central government where the import or export unit is located or the applicant resides. The fishery administration will submit the application to the fishery administration of the State Council for approval after verification. Import and export business activities should be undertaken by units that have the right to import and export the commodities concerned.

Import and export of the above-mentioned aquatic wildlife by zoological gardens for exchange should be verified and approved by the construction administration of the State Council before it is approved by the fishery administration of the State Council.

Article 24. Economic returns gained by holding exhibitions of aquatic wildlife or its products should mainly be used in the protection of aquatic wildlife.

Chapter 4: Awards and Penalties

Article 25. Units and individuals that have performed one of the following deeds will be awarded by the people's government above county level or its fishery administration:

1. Outstanding contributions to resource investigation, protection and management, propagation and education and exploitation and utilization of aquatic wildlife.
2. Strict implementation of the Law for Protection of Wildlife with remarkable achievements.
3. Remarkable results in salvage, protection, taming and propagation of aquatic wildlife.
4. Great service in preventing or reporting in a timely manner the discovery of acts violating the law and regulations for protection of aquatic wildlife.
5. Great contributions in the investigation of cases in which wildlife resources have been damaged.
6. Great achievements in scientific studies of aquatic wildlife or remarkable benefits attained in the application and popularization of relevant research results.
7. Engagement in the protection and administration of aquatic wildlife in grass-roots units for five years or more with remarkable results.
8. Other special contributions to the protection and administration of aquatic wildlife.

Article 26. Those who catch or kill aquatic wildlife under national major protection should be investigated to determine their responsibility for the crimes in accordance with the Supplementary Stipulations for Punishing Crimes of Illegal Catching and Killing of Rare Aquatic Wildlife Under National Major Protection on the Verge of Extinction adopted by the Standing Committee of the People's Congress. If the offenses are obviously light and the harm done is not serious or the crimes committed are not serious enough for trial and sentencing, the fishery administration will confiscate the animals caught and the catching equipment and illegal gains of the offenders, revoke their special

catch permits and impose fines not exceeding 10 times the value of the animals caught. Fines imposed on those offenders without catches will not exceed 10,000 yuan.

Those destroying the main habitats of the aquatic wildlife under national or local major protection in nature reserves for aquatic wildlife in violation of the law and regulations for protection of wildlife are subject to a fine according to Article 37 of the Law for Protection of Wildlife. The range of fines imposed on offenders will not exceed three times the cost of restoration of the damaged site to its original condition.

Article 28. Those selling, purchasing, transporting or carrying aquatic wildlife under national or local major protection or its products in violation of the law and regulations for protection of wildlife will be punished by the industrial and commercial administration or its authorized fishery administration. The objects and illegal gains are subject to confiscation and the fine imposed on offenders will not exceed 10 times the value of the objects.

Article 29. Those forging, selling, or transferring permits for taming and propagation are subject to a fine according to Article 37 of the Law for Protection of Wildlife, the range of fine not to exceed 5,000 yuan. Those forging, selling, or transferring special catch permits or import and export certificates are subject to a fine according to Article 37 of the Law for Protection of Wildlife. The range of fines will not exceed 50,000 yuan.

Article 30. For those who tame and propagate aquatic wildlife under national major protection without a permit for taming and propagation or who exceed the range assigned by the permit for taming and propagation in violation of the law for protection of wildlife, their illegal gains will be confiscated and a fine not exceeding 3,000 yuan will be imposed on them by the fishery administration. At the same time their aquatic wildlife can be confiscated and their permit for taming and propagation revoked.

Article 31. For foreigners who engage in scientific activities such as scientific investigation, collection of samples, filming, and videotaping within China's territory without approval, the data and samples collected and the film shot during investigation will be confiscated by the fishery administration. At the same time a fine not exceeding 50,000 yuan can be imposed on them.

Article 32. Those who act in one of the following ways which do not yet constitute a crime will be punished according to the Regulations of the PRC for Security Administration and Punishment:

1. Obstructing inspectors from fishery administrations and hindering their carrying out their duty according to law;
2. Stealing, looting or purposely impeding the instruments, equipment or facilities for protection of aquatic wildlife.

Article 33. Objects confiscated according to the law and regulations for protection of wildlife will be disposed of according to the relevant regulations set by the fishery administration of the State Council.

Chapter 5: Appendices

Article 34. The fishery administration of the State Council is responsible for the interpretation of these Regulations.

Article 35. The Regulations are to come into effect on the date of promulgation.

Liaoning Steel Complex Adopts Pollution Control Measures

OW0812020093 Beijing XINHUA in English
0035 GMT 8 Dec 93

[Text] Shenyang, December 8 (XINHUA)—Benxi city in northeast China, which was once "invisible" from satellite because of thick smoke and other pollutants, will have a cleaner sky thanks to its current efforts in pollution control.

The Benxi Steel and Iron Complex, one of the leading pollutant dischargers in this city in Liaoning Province, has recently equipped all seven huge boilers at its power plant with dust removal devices, thus reducing the local dust fall by one-third, local officials said.

The dust-removal project has cost three years and 80 million yuan, contributed by the government and the complex. After it went into operation recently, local citizens, especially those living in the surroundings of the complex, said that they felt the air is obviously cleaner this winter, according to the officials.

Song Jian, a State Councilor, sent his congratulations to the complex for its encouraging achievements in reducing pollution.

The project is a part of "Operation Blue Sky," launched in the city five years ago to reduce serious air pollution.

The "Operation Blue Sky" involves a total investment of 375 million yuan, part of which will be undertaken by the Benxi steel complex.

Though suffering from a serious shortage of funds, the officials said the complex will invest another 300 million yuan to carry out five more projects to reduce pollution.

Jiangsu Province Sets Up Environmental Protection Fund

OW0812090093 Beijing XINHUA in English
0809 GMT 8 Dec 93

[Text] Nanjing, December 8 (XINHUA)—East China's Jiangsu Province has decided to set up an environmental protection science development fund this year.

A provincial official in charge of scientific development said the fund, which comes mainly from penalties levied against polluters, will amount to more than four million yuan.

It will be used in spreading environmental protection science research findings and pilot projects in the form of low-interest and interest free loans.

The official noted that the fund will advance the study and popularization of research findings in environmental protection and promote the harmonious development of the economy and the preservation of the environment.

China's leading economic giant, Jiangsu put forward a strategy of developing its economy by relying on science in 1989.

Pollution Said Worsening in Some Areas

*HK0812125193 Beijing CHINA DAILY in English
8 Dec 93 p 3*

[By staff reporter Zhu Baoxia: "Pollution Is Worse in Some Areas of Country"]

[Text] Environmental pollution has worsened in some parts of the country.

The situation has occurred because of relaxed enforcement of State laws and regulations on environmental protection.

The findings are from a recent national inspection on environmental law enforcement by the State Environmental Protection Agency (SEPA).

The investigation determined that many local policy makers sacrifice their environment for the sake of economic profit.

Local governments must further tighten supervision over implementation of environmental laws and regulations and crack down on illegal conduct that endangers the environment, according to SEPA official Hu Baolin.

Hu said his bureau will continue its publicity campaigns to raise environmental awareness across the nation, especially that of leaders at various levels.

The agency will map out some new regulations and revise old ones in accord with changed economic and social situations.

It hopes the central and local governments will increase their budgets for environmental work.

SEPA, jointly with the environmental protection committees under the State Council and the National People's Congress (NPC), just concluded a four-month environmental inspection in seven provinces and regions.

They include Heilongjiang, Shandong, Yunnan, Guangdong, Anhui and Jiangsu provinces and Xinjiang Uygur Autonomous Region.

It is the first phase of a nation-wide environmental law enforcement inspection. The whole programme will take two years.

This year's inspection focused on the enforcement of State laws on environmental protection and wild life preservation.

The inspection discovered that a contract responsibility system has been introduced in many provinces to protect the environment. And environmental protection work has been included in provincial social and economic development programmes.

The seven regions have altogether promulgated some 50 local regulations on environmental issues.

Yet, some local leaders have neglected environmental problems while pursuing profits.

Lunan County in Yunnan Province, for example, constructed a cement plant in the State "Stone Forest" scenic area.

And a vice-governor of Dali Prefecture decided, without authorization, to stop collecting pollution charges from local industrial enterprises for three years.

Jixi Iron and Steel Company in Heilongjiang Province, which is the biggest pollutant in the city, did not complete its pollution treatment projects on time and refused to hand over a fine of 10,000 yuan (about \$1,724).

In Hangzhou, capital city of Zhejiang Province, about 80 percent of the 56 enterprises inspected discharge untreated pollutants into the environment.

Meanwhile, some harmful wastes have been imported into the country.

Some small township enterprises, closed in the past by the State for contaminating the environment, have reemerged in some places.

Government Project To Promote 'Ecological Agriculture'

*HK1012110093 Beijing CHINA DAILY in English
10 Dec 93 p 1*

[By staff reporter Gao Jinan: "Officials Introduce Ecological Agriculture"]

[Text] The government yesterday introduced a large-scale ecological project to integrate agricultural development and environmental protection.

The project, given high priority by the State Council, is considered a vital move in stemming deterioration of the rural environment, reducing natural disasters and promoting sustained development of an "ecological agriculture," according to State Councillor Chen Junsheng.

The undertaking is a joint endeavor among the departments of forestry, environment protection, water conservancy and agriculture, Chen told a national conference yesterday.

The State councillor urged governments at all level to consider rural ecology, an issue he said has been insufficiently weighted in the development of agriculture and rural economy.

Chen said he hoped that departments like forestry, water resources, planning, finance and sciences would coordinate their efforts in implementing the project.

The Ministry of Agriculture and six other ministries launched the plan yesterday by designating 50 counties as ecological agricultural-development centres.

Starting in 1980, China has introduced experimental-environmental projects in about 1,000 villages, townships and counties.

According to Vice-Agricultural Minister Hong Fuzeng, about 200 counties, with a total area of some 14 million hectares of farmland, will be developed as ecological-agriculture projects by the year 2,000.

China feeds 22 percent of the world's population with only 7 per cent of its farmland.

Hong said the worsening agricultural ecology should be controlled as soon as possible.

Because of population growth and industrial production, 466,700 to 533,300 hectares of farmland are occupied annually by urban, industrial, mining and transportation projects.

"We have to face the challenges and explore ways to develop agriculture while protecting the environment," Hong said.

He suggested that the ecological development of agriculture, forestry, animal husbandry, sidelines and fishery should be coordinated to ensure a balanced increase in output.

While reducing pollution caused by cities, industries and township enterprises, the utilization of fertilizers, chemical pesticides and plastic sheet in the rural areas should also be tempered, he said.

Deng Xiaoping's Daughter Addresses Global Climate Seminar

*OW1312004793 Beijing Central Television Program
One Network in Mandarin 1400 GMT 12 Dec 93*

[From the "News" program]

[Text] How to discover a way to deal with climate change in line with China's national conditions was the major topic of a recent international seminar on China's national policy toward global climate change. Deng Nan, vice minister in charge of the State Science and Technology Commission, pointed out: China is one of the few developing countries using coal as a major energy source. How to establish a national policy based on China's national conditions to reduce the emission of greenhouse gases and to protect the global climate is an important task currently facing the Chinese Government.

The seminar was jointly held by the State Science and Technology Commission and ADB [Asian Development Bank]. [video shows dozens of Chinese and foreign participants attending the seminar, an unidentified man, and Deng Nan speaking]

Power Industry To Focus on Reducing Pollution

HK1212081393 Beijing CHINA DAILY (BUSINESS WEEKLY) in English 12-18 Dec 93 p 8

[By Chang Weimin: "State Vows To Reduce Pollution"]

[Text] China's power industry is to concentrate on the development of resources that produce less pollution than coal-fired generators.

Efforts to tap hydro and wind resources will be encouraged, according to an official from the Ministry of Power Industry.

In 2000, hydropower generating capacity will account for 26 percent of the country's total, compared with 24 percent at present.

That means hydropower generating capacity will climb to 75 to 80 million kilowatts that year. The capacity at the end of 1992 stood at 40.7 million kilowatts.

The industry expects to increase its power generating capacity to 310 million kilowatts in 2000 from the present 170 million kilowatts.

The majority of electricity in China is generated by coal-fired power plants, which emit minute sulphur particles that contaminate the environment.

But several hydropower stations, with capacity totalling 20 million kilowatts, are under construction.

Of them, a group capable of producing 9 million kilowatts were kicked off this year.

Jiang Shaojun, the ministry's spokesman, predicted 148 billion kilowatt-hours would be generated by hydropower stations this year, compared with 134.5 billion in 1992.

Development of other energy sources, such as wind power, is also to be pushed forward, Jiang said.

The industry will strive to gain a capacity of 1 million kilowatts by using wind power.

In windy North China, especially the country's north western provinces and autonomous regions, wind generators are common.

In the meantime, the industry will make major measures to reduce pollution from thermal power plants.

The measures are significant as coal-firing plants will remain the mainstay of the industry for the rest of the century.

Installing waste-recycling systems in old power stations is very expensive.

But new thermal plants will be designed to reduce or eliminate pollution.

However, the official admitted that as a developing nation, China needs time to reach anti-pollution standards set by the Western nations.

The industry has made special efforts to raise the standards.

The industry has begun co-operation with the Japanese Government to treat sulphur-rich coal and smoke from coal-fired thermal power plants.

The industry will use funds from the Japanese Government for several projects.

Two sulphur treatment projects are under way in Huangdao, Shandong Province, and Taiyuan, Shanxi Province.

As for the nuclear power sector, another official from the ministry said several new plants are under consideration.

"We attach strict anti-radiation standards to our nuclear plants," the official said.

China has two nuclear power stations, one in Zhejiang Province that is already in operation and the other in Guangdong Province that is to go into operation this year.

Capacity of the two stations totals 2.1 million kilowatts.

No other nuclear power plants are likely to go into operation until after 2000.

However, construction of at least three could be kicked off before the end of the century, the official said.

China, where nuclear power generation is in its beginning phase, is seeking moderate development in this sector.

Ministry: Forested Land Increases To 14 Percent

OW1412135293 Beijing XINHUA in English
1322 GMT 14 Dec 93

[Text] Beijing, December 14 (XINHUA)—Some 14 percent of China is covered with forests, eight million hectares more than five years ago.

Figures given by the Forestry Ministry today show that China's forest area has been increasing at an annual growth rate of 1.65 percent during the past five years.

The afforested area, totalling 33.79 million hectares, is the biggest in the world, figures from China's fourth forest resources survey show.

China set up its national forest resources monitoring network in the early 1970s, which has now undertaken four surveys.

During this fourth one, from 1989-1993, the forest resources growth rate was over 400 million cubic meters annually, a quarter higher than the annual consumption rate of 320 million cubic meters.

With progress in stopping destructive felling, Xu said, the present problem lay in the low quality and low productivity of the forests.

He said that the socialist market economy required better capital management of the forestry resources which could be realized as more state-owned forest-related enterprises become joint-stock businesses.

Meanwhile, he said, the state was making new laws to give the forests more effective and stricter protection.

Call for More Attention to Environmental Protection

OW1412153393 Beijing XINHUA in English
1455 GMT 14 Dec 93

[Text] Xian, December 14 (XINHUA)—A meeting was held today in Yulin city, northwest China's Shaanxi Province, calling for efforts to solve environmental pollution due to exploration of natural resources around the area.

State Councillor Song Jian and other leaders from the central and local governments took part in the meeting, which was sponsored by the Environmental Protection Committee of the State Council.

Speaking at the meeting, Xie Zhenhua, director of the State Bureau of Environmental Protection, said that total proven coal reserves in the adjacent area of Shanxi-Shaanxi-Inner Mongolia now reach over 280 billion tons.

He said that reasonable exploration of coal resources in the area is of great significance to promoting the development of the national economy.

But, he added, natural conditions in the area are poor due to an overemphasis on exploration, to the detriment of environmental protection.

As a result, the environment was seriously polluted in this area, with much coal wasted and a large portion of topsoil washed away, he said.

He added that the central government has paid very close attention to environmental protection in developing natural resources in the area.

He urged taking forceful measures to reorder coal exploration and strengthen supervision over environmental protection work in this area.

In the near future, he continued, the urgent task is to clear out rivers to ensure that flood peaks pass safely in the coming year.

The participants also investigated the serious soil damage in the area due to natural resource exploration.

NPC's Forum on Environmental Protection Held in Jinan

SK1612043593 Jinan Shandong People's Radio
Network in Mandarin 2300 GMT 15 Dec 93

[Text] The environmental protection work forum of the National People's Congress [NPC] was held in Jinan on 15 December. This forum was primarily devoted to studying how to orient the protection of environment and natural resources to the demands of the new situation and to explore how to take up the new challenges facing environmental protection.

Wang Bingqian, vice chairman of the NPC, made a speech at the forum. He said: As a fundamental national policy of our country, environmental protection has always attracted high attention from the party and the state. The vast numbers of the people have also strongly demanded the prevention and control of pollution and improvement of the ecological environment. Therefore, party and government leaders at all levels should actually list environmental protection work as a major item on their daily agenda and strive to do the work well. The NPC and the people's congress of various provinces, autonomous regions, and municipalities should accelerate the pace of protecting environment and further strengthen inspection and supervision over the implementation of the laws on environmental protection in order to give rise to a new

situation in which the NPC, people's congresses at various levels, governments at various levels, various circles in society, and the broad masses of the people make concerted efforts to manage the work altogether.

At the forum, Zhao Zhihao, deputy secretary of the provincial party committee and governor of the province, extended a welcome to the comrades of the environmental protection committee under the NPC and the comrades from various fraternal provinces, municipalities, and autonomous regions, on behalf of the provincial party committee, the provincial people's congress standing committee, and the provincial government.

Qu Geping, vice chairman of the environmental protection committee under the NPC, presided over the forum and made a report entitled "People's Congresses at All Levels Should Strengthen the Protection of Environment and Natural Resources." Attending the forum were Lin Zongtang, Yang Jike, Qin Zhongda, and Yang Zhenhuai, vice chairmen of the environmental protection committee under the NPC; and Li Zhen, chairman of the Shandong Provincial People's Congress Standing Committee.

Bear Comes Under National Protection

OW2212141193 Beijing XINHUA in English 1133 GMT 22 Dec 93

[Text] Beijing, December 22 (XINHUA)—China has introduced a licensing system to control the exploitation of bears, an official said here today.

Shen Maocheng, vice-minister of the forestry, said that China has no plan to breed more bears and it will close those breeding lots that do not meet minimum conditions.

At a press conference hosted by the Information Office under the State Council, Shen said that though China is abundant in bears, it has barred hunting bears since 1989, when the animal came under national protection.

He said that most bears living in the country's feed lots were captured before 1989. Since then, China has not approved any hunting of wild bears.

Bear gut, obtained by killing a bear, is a traditional Chinese medicine. To protect its bear resources, China began in the 1980's to drain bile from breeding bears.

He said that draining a bear's bile in a breed lot saves 44 wild bears. If one bear's bile can be drained for five years, that would save 220 wild bears.

He said that the technique is scientific. Moreover, it is not only bearable, but also painless to the bear. And it imposes no negative effects on the growth and reproduction of the animal.

"The method not only protects the wild bear, but also provides bile to meet the demands of the domestic market," he said.

The method also complies with international norms on the protection of wild animals, according to the official.

Xinjiang Region Provides Better Environment for Wildlife

OW2812071393 Beijing XINHUA in English 0654 GMT 28 Dec 93

[Text] Urumqi, December 28 (XINHUA)—Northwest China's Xinjiang Uygur Autonomous Region has made unremitting efforts to provide the local wildlife with a better environment in recent years.

So far, the region has built 20, and plans another ten, nature reserves, eight of which are nature reserves of wild animals.

Covering an area of 1.6 million sq km, Xinjiang has 773 species of vertebrate animals. Some of them are found in Xinjiang only; they include the Tarim hare and Tarim red deer. Some others such as wild horses, wild donkeys and wild camels are considered endangered species worldwide.

While firmly following state laws and regulations on the protection of wildlife, the region has promulgated a series of local regulations on protection of wildlife in its vast territory.

At the same time, the region's governments at all levels have paid attention to severely punishing people engaging in illegal activities such as poaching and trading in protected animals.

Besides government departments and personnel specializing in protection of wildlife, many mass organizations have been established in recent years to help protect wild animals.

As a result of these comprehensive measures, the living environment for wild animals in the region has been markedly improved and the number of wild animals has increased substantially. For example, the number of wild horses introduced from Germany, the United States and Britain has grown from 13 in 1985 to 49.

Environmental Protection Stressed in New Year

OW0301142194 Beijing XINHUA in English 1349 GMT 3 Jan 94

[Text] Beijing, January 3 (XINHUA)—To continue perfecting the legislation for environmental protection is a major task in 1994, State Councillor Song Jian said here today.

He urged that close attention should be paid to coping with the relationship between economic construction and environmental protection in the light of China's fast economic growth.

Song, also director of the Environmental Protection Committee of the State Council, told XINHUA that the work of environmental protection faces new opportunities and challenges in the new situation this year.

To meet the demand of the establishment of a sound socialist market economic structure, he said, a range of laws and regulations concerning environmental protection will be enacted in the new year.

He also said that the supervision and inspection of the implementation of the environmental laws and regulations should be further strengthened.

In addition, efforts should be made to raise the consciousness of the importance of environmental protection among the whole nation, he said. People from all walks of life, he stressed, should be encouraged to take part in the work of environmental monitoring and control.

He noted that those who break the environmental protection laws should be punished severely.

The State Councillor said that emphasis should be placed on tackling pollution, and various kinds of actions should be taken to protect precious wild animals and plants.

He stressed that the work of environmental protection should be brought into the scope of policymaking of governments at all levels.

Fujian Ranks First in Forest Resources

*OW0601015394 Beijing XINHUA in English 0136 GMT
6 Jan 94*

[Text] Fuzhou, January 6 (XINHUA)—Fujian in south-east China is now top of the league of China's provinces in forest cover.

According to the fourth national survey of forest resources, trees cover 6.148 million hectares in Fujian, an increase of 1.145 million hectares over 1988, and its timber reserves total 395 million cubic meters, up 15.77 million cubic meters.

The forest cover in the province is 52.4 percent, giving it the lead among provinces, municipalities and autonomous regions on the mainland, and 9.2 percentage points more than in 1988.

Fujian's territory includes 80 percent of hilly areas suitable for tree planting. It has become one of China's key timber producers.

A provincial official in charge of forestry disclosed that the province has formed a complete forest industrial set-up over the past four decades.

At present, the province has afforestation areas totalling 1.81 million hectares, 500,000 hectares more than five years ago and an increase of 6.4 percent annually.

The official noted that the success resulted from scientific planting and administrative measures to ban indiscriminate felling of trees.

AUSTRALIA

Britain To Pay for Cleanup of Nuclear Test Sites

BK1112124093 Hong Kong AFP in English 0457 GMT 11 Dec 93

[Text] Sydney, Dec 11 (AFP)—Britain has closed the door on a controversial part of its relationship with Australia by agreeing to pay a 45 million dollar [Australian dollars] (30 million U.S.) settlement over sites it once used for nuclear tests, Aboriginal Affairs Minister Robert Tickner said Saturday.

The ex-gratia payment ends a long-running dispute over the clean-up of British test sites at Maralinga, Monte Bello Islands and Emu Field in the southern Australian outback.

Australia has long argued that it was Britain's responsibility to clean up the nuclear contamination which it claims still affects the lives of local Aborigines.

"The British decision is welcomed, it will allow Britain and Australia to put behind us one of the saddest aspects of our relationship," Tickner told AFP from Canberra.

"It is almost impossible to conceive now that atomic weapons were actually tested in Australia, they will leave a legacy of contamination for many thousands of years to come."

The indigenous Aborigine population was driven off its traditional lands to make way for the British nuclear tests and returned in the 1980s only to learn the area had been exposed to high levels of toxic contamination.

"As a result of the testing, Aboriginal people lost the use of their traditional lands, but the compensation will allow a clean-up and fencing where appropriate and will allow us to have a much more mature relationship between Britain and Australia," Tickner said.

The Aborigines filed a formal complaint to Britain in 1991, leading Australia to press Britain to share rehabilitation and compensation costs of the Maralinga nuclear testing range, abandoned by Britain in 1967.

The settlement, to be paid to Australia in installments over the next six years, removed a "major irritant" to the relationship between Australia and Britain, British Foreign Office Minister Alastair Goodlad said in London Friday.

Australia had agreed in turn to abandon all further claims, he said.

Australian Primary Industries and Energy Minister Simon Crean and Foreign Affairs Minister Gareth Evans said in a joint statement from Canberra that resolution of the issue had vindicated Australia's stance about the condition of the sites left by Britain.

"Australia has never accepted Britain's denial of legal or moral responsibility for this issue," the ministers said. The condition of the sites left by Britain "was unacceptable even by the standards that then applied."

A study by Australian, British and U.S. scientists, completed in 1990, traced the full extent of plutonium on

Aboriginal land and found that the Aborigines' outdoor lifestyle made them highly vulnerable to the threat of plutonium, a carcinogen.

Forest Industry Ready To Implement Biodiversity Pact

BK3012084093 Melbourne Radio Australia in English 0100 GMT 30 Dec 93

[Text] The forest industry say they have nothing to fear from the world's newly-effective biological diversity agreement. The international convention on biological diversity agreed upon at the Earth Summit in the Brazilian capital, Rio de Janeiro, 18 months ago came into effect yesterday. Under the agreement, companies will have to pay royalties to states or nations if they want access to native plants and animals. Jim Divine of the Association of Forest Industries says that by any international standard, Australia's forest practices are a model of sustainability.

[Begin Divine recording] With more than 100 years of operation, managed forest logging in this country has not resulted in any extinction or loss of a single animal or plant species. The other thing is the fact that we are working to sustain the yield patterns and we are working in less than one percent of the forest to (?state) annually [End recording].

State governments are expected to start work in the new year on a new strategy to preserve the nation's genetic material. The strategy is the first step towards implementing the international biodiversity agreement. Under the agreement, companies will be forced to pay royalties to states or nations if they want access to native plants and animals. The world-wide fund for nature which took part in the negotiations says the agreement will help ensure biological resources are used sustainably. A consultant for the organization, Alistair Graham, says its now up to the states to work out royalties.

[Begin Graham recording] It will be state governments who can be expected to assert proprietor ownership of wild biological resources and they are the ones that would have the commercial interest to negotiate such royalty or rental payments. And it will be up to them and it has to be said that on the basis of past experience on royalties of minerals or wood, they may not do very well. But at least the opportunity is there [End recording].

BURMA

'Enlightened' Timber Industry Seeks Environmentally Conscious Investors

BK2412093293 Hong Kong AFP in English 0205 GMT 24 Dec 93

[Text] Rangoon, Dec 24 (AFP)—The Burmese timber industry, the country's leading foreign exchange earner, is actively courting foreign investors while promoting sound ecological principles.

And its forestry conservation practices have enabled the government to reap rare accolades from a Western world

which was outspoken in its criticism of the military junta's takeover after public demonstrations five years ago.

"Burma gets a bum rap" on logging practices, an otherwise-critical foreign observer commented. "The government is repressive, but its conservation policies are enlightened," a Western diplomat said.

With about 75 percent of the world's teak reserves and a large quantity of other hardwoods, Rangoon has invited up to 100 percent foreign investment in everything from sawmills to furniture factories to gain sorely-needed funds for development.

It intends, however, to maintain strict control of logging operations in order to preserve its forest resources for the future, officials stressed in recent interviews here.

About half the country is covered in forests, and officials said that so far only three million cubic meters (105 million cubic yards) of wood had been cut, compared to 40 million cubic meters (1,400 cubic yards) in Malaysia, which is half the size of Burma.

Before neighboring Thailand banned logging on its own territory in 1988, it had almost halved its forest cover.

When Rangoon called a halt early last year to allegedly abusive Thai logging in concessions along the border, it adjusted its income targets accordingly, planning a 6.9 percent GDP drop in the forestry sector.

In the 1994-95 fiscal year, starting April 1, it hopes to see a new rise in income as investors from places such as Sweden and Thailand come on stream with renovations to local hardwood furniture factories.

But would-be foreign investors are mainly looking for big profits and a quick return, instead of taking a longer view, officials of the Forestry Department and the state-run Myanmar Timber Enterprise complained.

They said they need equipment—including tractors, skidders and road-building machinery to help speed up extraction and delivery to the investors—as well as marketing and technology knowhow.

From the felling of a tree to the factory can take up to two years. "The faster we can do it, the faster we can produce downstream products," one official said.

But all officials, including Forestry Minister Lieutenant General Chit Swe, stressed that Burma's future resources would not be sacrificed.

Interviewed surrounded by top aides and advisors, the minister, a member of the ruling junta, noted that no one else in the group was wearing military dress.

"I'm the only one wearing the green," he said, tugging at the sleeve of his forest-green uniform. "I like green. I am a conservationist."

His statement was backed up separately by other officials, one of whom said. "The minister is a fanatic. He doesn't want to fell any trees. He wants to lower the quota. What he wants are natural parks, wildlife, eco-tourism."

Under a system of selective felling on a sustainable basis, the Forestry Department allocates a quota of Annual Allowable Cuts (AAC) for all commercial varieties in strictly-defined sites.

Loggers could harvest up to 350,000 tonnes of teak and 1.3 million tonnes of other hardwoods annually without endangering future extraction, according to official calculations.

Actual figures stand at approximately 250,000 tonnes and 500,000 tonnes—due in part to equipment shortages, officials acknowledged.

They also said the shortfall compensated for remote areas outside their control along the borders—estimated by one official at "maybe 5-7 percent" but which foreign analysts put at between 15 and 20 percent.

The ministry meanwhile replants some 80,000 acres (200,000 hectares) a year, half in teak and other hardwoods. Much of the rest is devoted to faster-growing trees to be used for the fuel on which 70 percent of the population is dependent.

Foreign Ministry Issues Press Release on Ozone Protection

*BK3012032593 Rangoon Radio Burma in Burmese
0130 GMT 30 Dec 93*

["Press Release" issued by the Foreign Ministry of the Union of Myanmar [Burma]—dated 30 December 1993]

[Text] The Government of the Union of Myanmar [Burma] has become a party to the following convention and protocol by accession and acceptance on 24 November 1992:

The Vienna Convention for the protection of the ozone layer completed in Vienna on 22 March 1985; Montreal Protocol on Substances that Deplete Ozone Layer completed at Montreal on 16 September 1987; and Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer adjusted at the second meeting of the parties on 29 June 1990.

The Vienna Convention provides a framework containing an agreement in principle to cooperate in protection of the ozone layer and the Montreal Protocol classifies actions to phase out the ozone depleting substances, such as chlorofluorocarbons, CFC, by the end of this century.

As a party to the protocol, Myanmar will be spared from the trade restrictions imposed by the protocol and will be allowed to import controlled substances within a 10-year grace period for limited domestic use for refrigeration and air conditioning.

Additionally, the protocol will provide Myanmar assistance to obtain ozone friendly technology and financial assistance to affect the necessary readjustment. Furthermore, Myanmar's accession to these important instruments underlines its commitment and responsibility to protect the global environment.

Since the establishment of the National Commission for Environmental Affairs in February 1990, the Union of

Myanmar signed in June 1992 the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity.

INDONESIA

Australia Provides Grant for River Management Project

BK1212091993 Jakarta KOMPAS in Indonesian 23 Nov 93 p 3

[Text] Jakarta, Kompas—Australia, through its International Development Aid Bureau (AIDAB), has provided a 6.1-million Australian dollar (8.3 billion rupiah) grant for planning and managing district rivers (DAS) in Noelmina, East Nusatenggara. A memorandum of understanding [three preceding words in English] was signed in Jakarta on 22 November by Forestry Minister Jamaludin Surjahadikusumo and Australian Ambassador to Indonesia Allan R. Taylor.

The Australian ambassador clarified that the effort was undertaken as part of the Australian community's responsibility in connection with environmental problems. The Australian Government believes that its cooperation with Indonesia will bring about mutual benefit.

Mr. Taylor admitted that this is the first time that Australia has participated in any of the forestry projects. Besides, East Nusatenggara is not a new region because prior to this Australia had participated in several other projects such as the Joint District Development project which concluded in March 1992.

The Noelmina DAS project was selected because the region is one of the 39 DAS projects which the Forestry Department considers the most prone to land erosion.

In his statement, Forestry Minister Jamaludin clarified that the government has five objectives to achieve in carrying out the DAS projects. The first is to maintain a balanced hydrology condition in an effort to minimize forest degradation, prevent land erosion, destruction of land, and floods. The second objective is to increase land productivity, while the third is to create more public awareness about the importance of forests, land, and water pollution. The government's fourth objective is to increase the central and provincial government's capability of managing natural resources. The fifth objective is to increase the local community's living standards.

Industrialists To Participate in Eco-Efficiency Program

BK1512104593 Jakarta SUARA PEMBARUAN in Indonesian 24 Nov 93 p 4

[Excerpts] Jakarta, 24 Nov—Several Indonesian businessmen have expressed their readiness to apply the eco-efficiency program to their industrial development strategy. This is intended to comply with the eco-labelling policy and at the same time to practise the principle of sustainable development.

Mohamed Hasan, chairman of the Business Council for Sustainable Development (MUIPB), addressed a meeting on enforcing the eco-efficiency program in current industrial development in Jakarta on 23 November. [passage omitted]

Professor Dr. Otto Sumarwoto, executive director of MUIPB, said an industry must improve its production efficiency and comply with environmental regulations as required by the society.

The environmental expert from the Bandung-based University of Pajajaran said that lately the government has been encouraging industrialists to advocate the principles of environmental protection by adopting environmental regulations and making structural changes in their production processes. However, members of the international community who are consumers should also boycott goods whose production processes produce environmentally harmful waste. [passage omitted]

According to Otto, basically, the eco-efficiency program is an effort to urge industries to use efficient raw materials that will reduce pollution output. In this way, the industries are minimizing the environmental impact. In view of this, the eco-efficiency program not only requires industries to abide by the people's demand for environmental protection, it also provides the industries with competitiveness and increases their profits over the long term. [passage omitted]

Editorial Views Call for Press To Reveal Names of Polluters

BK2512093793 Jakarta SUARA PEMBARUAN in Indonesian 16 Dec 93 p 2

[Editorial: "Revealing the Names of Industries Responsible for Environmental Pollution"]

[Text] Sarwono, minister of state for the environment, spoke at a news conference following his meeting with Vice President Try Sutrisno in Jakarta on Wednesday, 15 December. It is interesting to note Sarwono's suggestion that the identity of those responsible for polluting the environment be revealed in the newspapers. He said it is only proper that the names of these businessmen or industries be identified clearly and not just by their initials.

The minister said this is one of the steps the Environmental Impact Management Agency will take at its next national working meeting on the clean river project, and will be implemented next year.

Minister Sarwono stressed that the press should not hesitate to reveal in detail the names of industries that are not concerned about the environment, or whose products and technology endanger the lives of their workers. He added that it is not sufficient for the press to publish their initials. He reiterated that if the press is confident that their information is accurate, they should not fear any resulting legal charges, because they will definitely win the case.

We say that the minister's suggestion is interesting because this is something new for our national press. Based on the principles of the journalistic code of ethics observed by members of the PWI (Indonesian Journalists Association), all journalists should honor an individual's privacy and not violate the principle of presumption of innocence [preceding three words in English]. This code of ethics is clearly spelled out in the PWI's journalistic code—an individual should be regarded as innocent until a decision is issued in court.

The Indonesian press is required to honor its journalistic code of ethics as stipulated by the PWI statute. The press should use wisdom and tact before it reveals the full name and identity or publishes a photograph of any person. One of the code's rules relates to the presumption of innocence, which requires the press to refrain from indirectly accusing a suspect of committing a crime or revealing his or her full identity until he or she is convicted in court. This is guaranteed in the PWI's journalistic code of ethics under Section 8 of Law No. 14/1970.

We feel that it would be very difficult for the national press to violate the code of ethics, the law, and the order that are the basis of their profession. There has never been a case where journalists have been charged in court for reporting inaccurate information and ordered to pay an exorbitant amount to the plaintiff in damages.

In view of recent cases where people felt defamed by press reports and pressed for legal charges against the journalist concerned, we also find that some journalists are being blackmailed and an unbelievable amount of money is being extorted.

The PWI, as a professional organization for journalists, has thus far been able to impose discipline and enforce its journalist code of ethics for reporting on the national press.

Addressing the 19th PWI Congress in Bandar Lampung from 2 to 5 December, Information Minister Harmoko reminded the PWI and its honorary board members of their unflinching obligation to uphold justice, defend the people's interests for the sake of the law, and take disciplinary action against members who violate the journalistic code of ethics.

We fully understand Minister Sarwono's objective in saying that the identity of industries proven to have caused environmental pollution should be revealed in the press. Such transparent reporting would force businessmen to be more serious about producing products and following production processes that do not harm the environment. But if the press reveals the identity of the industry causing industrial pollution, and at the end of the trial the court cannot convict the industry because of lack of evidence, who can guarantee that the publication in question will be free from countercharges and demands for compensation?

JAPAN

Japan and U.S. Act on Environmental Action Plan *OW0812080793 Tokyo KYODO in English 0711 GMT 8 Dec 93*

[Text] Tokyo, Dec 8 KYODO—Japan and the U.S. agreed Wednesday [8 December] to draw up an action plan on bilateral cooperation on global problems such as the environment, technology, development of human resources, population and AIDS, Japanese and U.S. officials said.

The two nations will announce the plan in February at a summit meeting between U.S. President Bill Clinton and Japanese Prime Minister Morihiro Hosokawa in Washington, Deputy Foreign Minister Koichiro Matsuura told a joint press conference.

Japan and the U.S. reached the agreement during a second round of talks on a common agenda for global cooperation under a trade framework agreement reached between the two nations in July.

The meeting was held Wednesday morning at the Foreign Ministry. Matsuura headed the Japanese delegation and the U.S. side was led by Timothy Wirth, a State Department counselor.

During the meeting, Japan and the U.S. agreed that Russia's dumping of radioactive waste into the Sea of Japan was a "regrettable" act and agreed to continue exchanging information and discussing the matter, Matsuura said.

James Baker, U.S. undersecretary of commerce for oceanic and atmospheric affairs, told the news conference the countries strongly oppose any dumping of radioactive waste under the London Dumping Convention.

"We believe that Russians have acted in violation of the agreement by the London Dumping Convention," Baker said.

"Our joint support of the ban on dumping has been an important new step here," he said.

The two sides agreed to start a fellowship program for engineers from January. Some 30 U.S. engineers from companies such as Ford Motor Co. and General Motors Corp. will study for a year at Japanese firms like Toyota Motor Corp., Nissan Motor Co., Hitachi Ltd. and Sony Corp.

For the next fiscal year, about 100 engineers will come to Japan under the fellowship.

Japan and the U.S. also discussed setting up a committee to cooperate on improvement of the environment in central and eastern Europe and are close to agreement on its establishment, Matsuura said.

Wirth said the two nations' cooperation in the area will make a "significant contribution in helping clean up enormous environmental problems that plague" the region.

Report Claims Success for Restrictions on Toxic Paint

OW1512110493 Tokyo KYODO in English 1038 GMT
15 Dec 93

[Text] Tokyo, Dec 15 KYODO—A government report on toxic chemical residues in the environment in 1992 claims the Environment Agency's restrictions on use of toxic tin compounds in paint on boat keels are beginning to have an effect.

The compounds are blamed for contaminating marine life.

The report, submitted to a subcommittee on chemical substances within the agency's central council for environmental pollution control, said there has been a slight improvement in the level of contamination from the compounds in the two years since the introduction of the restrictions.

But the report also said contamination from toxic substances, including polychlorinated biphenyl (PCB) and dioxins, though at low levels, is still continuing.

In a survey of 17 potentially harmful substances, eight, including the herbicide simetryn, were found in water and fish.

The substances are only mildly toxic and were detected in small amounts, but the report said more investigation is required since simetryn is reportedly capable of affecting marine plants at even low concentrations.

The report also said PCB was detected in 37 of 72 samples of sea bass and other fish taken from Tokyo bay and other parts of the country.

Dioxins, some known for their high toxicity, were present in silt at the bottom of Tokyo, Ise, and Osaka bays. The densities and frequency of occurrence were the same as in 1991.

A spokesman for the agency said they are unlikely to have an impact on humans, but noted that there is a need to assess the distribution because of the apparently wide area in which they are found.

Tokyo To Study Delivering Chemical Tanker to Russia

OW2112144093 Tokyo KYODO in English 1134 GMT
21 Dec 93

[Text] Tokyo, Dec. 21 KYODO—Japan agreed Tuesday [21 December] to study the possibility of providing Russia with an emergency storage facility such as a chemical tanker to hold liquid radioactive waste that might otherwise be dumped into the ocean, Foreign Ministry officials said.

Japan agreed to consider the Russian request for the emergency storage facility at a bilateral experts' meeting held at the Foreign Ministry, the officials said.

The two sides reconfirmed that it is essential to prevent further dumping of low-level liquid radioactive waste into the ocean by Russia, they said.

Russia told Japan it is storing about 1,900 tons of liquid radioactive waste in four vessels and other facilities around Vladivostok but that the storage capacity is nearly full.

The environment in the Russian Far East is in "critical" danger because, for example, one of the old vessels storing the liquid radioactive waste has a hole in it that might pose a threat in bad weather, the Russian delegation was quoted as saying.

Russia explained that emergency measures are necessary to cope with the situation and asked for Japanese cooperation in finding a chemical tanker with a storage capacity of between 5,000 tons and 25,000 tons, the officials said.

An estimated 5,000 tons of liquid radioactive waste are generated annually in Russia as a result of the dismantling of nuclear-powered submarines.

A 100 million dollar fund pledged by Japan to Moscow to help Russia scrap its obsolete nuclear weapons will be utilized to purchase the tanker or some other facility for emergency storage, they said. The tanker would be a used one, since it would take more than a year to build a new one.

The two sides agreed to hold another experts' meeting in Moscow in early January to further discuss the matter, they said.

Russia dumped 900 tons of liquid nuclear waste into the Sea of Japan on October 17. It suspended a planned second dumping following international protests, particularly from Japan and South Korea.

Tuesday's meeting was attended by Russian First Deputy Foreign Minister Michail Kokeev and five other officials from the Atomic Energy Ministry, the Navy and the Pacific Fleet.

The Japanese group was headed by Yukiya Amano, director of the Foreign Ministry's Science and Nuclear Energy Division. Officials from the Ministry of International Trade and Industry and Science and Technology Agency also attended.

At the meeting, Japan and Russia also reconfirmed plans to conduct joint research on the Sea of Japan in mid-January, the officials said.

South Korea will also take part in the joint research, which will sample both water and sediment around the point where Russia dumped the waste in October. Officials from the International Atomic Energy Agency (IAEA) may also be aboard the research ship, they said.

The Japanese and Russian delegations also basically agreed to conduct a second joint research expedition next summer if possible, they said.

The two sides will hold a joint working group meeting in Tokyo in March to discuss the results of January's joint survey, details of the proposed second investigation and other problems involving the storage of radioactive waste, they said.

On Wednesday, the Russian delegation will visit radioactive waste storage and processing facilities in the village of Tokai in Ibaraki Prefecture, the officials said.

Report Says Russian Nuclear Waste Had No Impact on Sea

*OW2212093193 Tokyo KYODO in English 0851 GMT
22 Dec 93*

[Text] Tokyo, Dec. 22 KYODO—Russia's dumping of liquid nuclear waste did not have any impact on marine life in the Sea of Japan, the government said in an interim report Wednesday [22 December].

The Maritime Safety Agency, the Meteorological Agency and the Fisheries Agency jointly conducted the survey at 14 sites in the Sea of Japan shortly after Russia dumped 900 tons of low-level liquid nuclear waste at sea in mid-October some 550 kilometers west of Hokkaido.

Judging from preliminary results, however, fish and other seafood analyzed were not more contaminated by radiation than in previous surveys.

The samples were taken from Japanese fishing grounds, which are some 200 kilometers away from the dumping site. A survey of the area close to the site is expected to be carried out in cooperation with Russia and South Korea soon, but not before mid-January, officials said.

A spokesman for the Russian Pacific fleet told KYODO NEWS SERVICE the fleet does not intend to resume nuclear waste dumping in the near future or to ask Moscow to issue a relevant permit.

A scheduled second dumping in October was canceled following international protests, especially from neighboring Japan and South Korea, over the danger of contaminating the environment.

Despite the halt to dumping other potential risks remain, the spokesman said. The fleet has reportedly passed its storage capacity for liquid nuclear waste and the tankers carrying the dangerous cargo are outdated, he said.

In talks with Russian officials and experts on the nuclear waste issue on Tuesday, Japan basically agreed it will supply a tanker to help Russia over the storage bottleneck.

"If this is realized, I think we can avoid the resumption of dumping for the time being," the spokesman said.

Fishery Agency To Probe Global Warming in North Pacific

*OW0601131094 Tokyo KYODO in English 1243 GMT
6 Jan 94*

[Text] Tokyo, Jan 6 KYODO—Japan will dispatch a research ship to the North Pacific on a one-month mission to investigate the cause of the global warming phenomenon, the Fishery Agency said Thursday [6 January].

The 2,000-ton Kaiyo Maru will set out Friday on the mission that is part of a 42-nation, 10-year project, known as the World Ocean Circulation Experiment (WOCE), the agency said.

The WOCE was launched in 1990 as a multilateral project to counteract the threat from global warming, which some scientists warn could make the earth uninhabitable for living creatures in the long run.

The scientists warn the burning of oil and other fossil fuels would boost the average temperature of the atmosphere by trapping heat from the earth's surface with an increasing density of carbon dioxide that prevents the dissipation of heat into space.

Under the WOCE, Japan is entrusted with investigating global warming in five broad areas.

This year, Japan will probe the phenomenon at 70 locations along the line of 30 degree latitude in a broad area of the North Pacific between the Japanese archipelago and the west coast of the United States.

The ship will measure the density of carbon dioxide and salinity and the temperatures of seawater at these 70 sites at intervals of 50 to 70 kilometers, the agency said.

On top of the research related to the global warming, the ship will investigate the living environment of tuna and other migratory fish at 90 locations to help assess the future conditions of fishery resources, it added.

Japanese, U.S. Researchers Find New PCB-Eating Organism

*OW0701124594 Tokyo KYODO in English 1108 GMT
7 Jan 94*

[Text] Niigata, Jan. 7 KYODO—A team of Japanese and U.S. Researchers have found a new organism that eats polychlorinated biphenyl (PCB), a poisonous pollutant, group members said Friday [7 January].

Nagaoka University of Technology in Niigata Prefecture and Michigan State University in the United States jointly discovered the microbe, temporarily named Rh1, that could help solve the problem of how to safely dispose of the toxic chemical.

Rh1, which propagates in soil, seems to be the most effective of the dozens of PCB-eating microbes that have been found since 1973, the members said.

PCB is formed by dozens of constituent elements of chlorinated carbon compounds. Rh1 resolves most of the elements, whereas previously discovered PCB-consuming microbes break down only some of them, the researchers said.

The team found the microbe in soil containing an agricultural chemical with a structure similar to PCB, they said.

They confirmed the effectiveness of the bacteria in tests on low densities of PCB, said Masao Fukuda, an assistant professor at the Japanese institute.

The group will try to upgrade Rh1 by gene recombination so that it can be used for high-density concentrations of PCB, and also examine if the byproducts of the bacterial action are safe, he said.

PCB was used in a wide variety of industrial applications as a heating fluid and electrical insulator, but is no longer produced because it was found to be a poisonous environmental pollutant.

NORTH KOREA

Russia, Japan Condemned for Polluting Sea Environment

SK1312104693 *Pyongyang KCNA in English 1029 GMT 13 Dec 93*

[Text] Pyongyang, December 13 (KCNA)—The chairman of the State Fisheries Commission of the DPRK issued a statement Monday, condemning Russia and Japan for having polluted to a great extent the East Sea of Korea and the Pacific by dumping large quantities of nuclear waste for over 30 years.

Far from lending an ear to criticism from the world public, Russia has announced that it would continue nuclear waste dumping in the East Sea of Korea and the Pacific, and Japan tries to avoid criticism, alleging that the nuclear waste it has dumped is not dangerous, the statement says, and continues:

It is impudent of Russia and Japan to talk about the DPRK's "compliance with the nuclear safeguards agreement" while wantonly violating international accord without an elementary morality.

Russia and Japan must refrain from their reckless act of decrying the DPRK, immediately stop dumping nuclear waste in the East Sea of Korea and the Pacific, apologize to the countries in the coastal areas, scoop up the dumped nuclear waste out of the sea at once and punish those responsible for the dumping.

We hope all the international organisations and community will pay deep attention to the destruction of sea biological resources by Russia and Japan and its consequences and take relevant measures.

SOUTH KOREA

Samsung Develops New Environmentally Safe Synthetic Resin

SK2812010893 *Seoul THE KOREA HERALD in English 28 Dec 93 p 8*

[Text] Samsung Petrochemical Co. has recently developed a new environment-friendly synthetic resin that can decay far more quickly than current degradable resins, a company spokesman said yesterday.

The resin decomposes within 60 to 80 days of being discarded and buried. When exposed to light for 30 days continuously, it totally poses its function as plastic, leaving for less environmental pollution, he said.

Developed by the company's umbrella research institute in Taejon, the bio-photo-degradable polyethylene resin is a commingling of polyethylene resin, and starch and other fillers which facilitate decomposition by germs and light.

The resin can be widely used for making vinyl bags and packing materials for a range of products, contributing to lowering environmental pollution, he said.

An ordinary degradable resin, when thrown away and buried, takes nearly five years to disintegrate. After disintegration, it still remains underground, polluting soil and ground water, he added.

The Samsung Group subsidiary, which has already begun production and sales of the new product, expects a high demand for the product both at home and abroad, given the growing worldwide awakening to environmental issues and the product's high quality.

Next year, the company, anticipating a 30 percent year-on-year growth in domestic demand, plans to produce some 20,000 tons of the bio-photo-degradable resin, priced at roughly 800,000 won (\$1,000) per ton.

"We will have ample domestic demand as environment-conscious consumers are expected to seek out less environmentally harmful plastic bags," the spokesman forecast.

The company also aims to export the new resin as well as its manufacturing technology to the United States, Japan and EC nations where the use of degradable resins is mandatory, the spokesman said.

In addition, he said, the new resin will have an effect of import replacements worth 8 billion won by sharply bringing down the prices of photo-degradable resins sold in the country.

Based on the product's potentiality, Samsung plans to make efforts to develop new uses and expand its supply, he said.

The company, meanwhile, has already applied for a patent for two skills in manufacturing the resin, and is also pushing ahead with getting an international patent, the spokesman said.

LAOS

ADB Grants Loan, Assistance for Tree Planting

BK2312104093 *Vientiane KPL in English 0901 GMT 23 Dec 93*

[Text] Vientiane, Dec 23 (KPL)—The Asian Development Bank (ADB), on 22 December, approved a loan and two technical assistance grants totalling 13.2 million U.S. dollars to Laos to develop tree plantations, according to XINHUA.

ADB said the plantation project, which is to cover 9,000 hectares, will increase annual wood production by 128,000 cubic meters and to reduce pressure on exploitation of natural forests.

The bank noted that the overwhelming dependence of Lao economy on forest resources has led to a rapid decline of forest cover in the country.

To check the rapid depletion of the country's forest resources, the Lao government has launched a new system of forest resource management to classify forest land into production, protection and conservation, and reforestation areas.

The plantation project, a part of the new system, is to be carried out in eight districts in Vientiane Prefecture and the Provinces of Vientiane, Bolikhamsai and Savannakhet to reestablish tree cover on unstocked and degraded forest lands.

MALAYSIA

Forestry Cooperation To Be Enhanced With Jakarta

BK1012094093 Kuala Lumpur BERNAMA in English
0826 GMT 10 Dec 93

[Text] Jakarta, Dec. 10 (BERNAMA)—Malaysia and Indonesia have agreed to intensify cooperation in forestry research and exchange programme of forest experts in efforts to counter anti-tropical woods campaigns by developed countries. Forestry Minister Jamaludin Suryohadikusumo said the cooperation would focus mainly on research and studies of tropical forests such as rattan, bamboos, and rubber. Malaysia and Indonesia view the cooperation very important because they share common problems in dealing with anti-tropical wood campaigns by advanced countries, he said in Surabaya, East Java last night. Jamaludin and his Malaysian counterpart, Datuk Sri Dr. Lim Keng Yaik, attended a dinner hosted by East Java Governor Basofi Sudirman in conjunction with the annual meeting of 38 forest experts from the two countries which is due to last [to] tomorrow. Jamaludin said both sides would intensify information exchange on tropical forest development and management system in efforts to confront anti-tropical wood campaigns sponsored by industrialised countries. We share a common political will with Malaysia to counter those who accuse developing nations of uncontrolled exploitation of tropical woods, he said. Such accusations are unfounded, he said, adding that Indonesia has always maintained a strict policy on forest preservation. Jamaludin said Indonesia with a large area of tropical forests would be playing a key role among ASEAN countries to counter such campaigns. The four-day meeting in Surabaya is the sixth such annual gathering among experts of the two countries.

PHILIPPINES

Coastal Waters Protection Agreement Signed

BK2112055893 Quezon City Radio Filipinas in English
0230 GMT 17 Dec 93

[Text] The environmental protection program of the government has received its much needed boost with the signing of an agreement to enforce a nationwide campaign to protect and preserve coastal water sites. The accord also provides for the prosecution of violators of laws covering

marine areas. The agreement was signed by heads of the offices of the Executive Secretary, Defense, DILG [Department of Interior and Local Government], Justice, DENR [Department of Environment and Natural Resources], among others.

TAIWAN

CITES Delegations in Taiwan

CITES Proposal on Rhino Horn Controls 'Difficult'

OW2812180793 Taipei CNA in English 1359 GMT
28 Dec 93

[By Benjamin Yeh]

[Text] Taipei, Dec. 28 (CNA)—The Geneva-based Convention on International Trade in Endangered Species [CITES], a UN-sponsored animal conservation organization, has proposed that Taiwan step up controls on the management of rhino horn and tiger bone stockpiles.

In a letter to the Council of Agriculture, CITES recommended that all rhino horn and tiger bone held by individuals be placed under government control at an appointed venue.

The letter came about three weeks after CITES had sent officials to Taiwan on a fact-finding mission. A CITES committee voted 3-3 earlier this year to postpone trade sanctions proposed by Britain's Environmental Investigation Agency, which claimed Taiwan has only perfunctorily cracked down on the illegal trade of rhino horn and tiger bone.

However, Tang Hsiao-yu, a COA section chief in charge of conservation affairs, indicated Tuesday [28 December] that implementing the latest CITES proposal would be difficult because the government cannot force the public to surrender private property.

CITES suggested in its letter that the ROC add a provision to its existing wildlife conservation law mandating individuals to register any rhino horn or tiger bone they own, and that a special government agency be organized to crack down on trading of endangered species on the island.

It also proposed that the government strengthen coordination with other countries, including Mainland China, to combat smuggling of endangered species.

CITES Officials To Assess Taipei's Conservation Efforts

OW0501082594 Taipei CNA in English 0744 GMT
5 Jan 94

[By P.C. Tang and Debbie Kuo]

[Text] Brussels, Jan. 5 (CNA)—A second delegation from the Convention on International Trade of Endangered Species (CITES) is scheduled to visit Taiwan later this month to reassess Taiwan's wildlife conservation efforts.

CITES spokesman Le Duc said the delegation will be comprised of four or five standing committee members,

who will deliver a report to the full committee in March in Geneva, after which a final decision will be made on whether to recommend trade sanctions against Taiwan.

The CITES standing committee voted 3-3 in a September meeting last year to postpone trade sanctions proposed by Britain's Environmental Investigation Agency, which claimed Taiwan had only perfunctorily cracked down on the illegal trade of rhino horn and tiger parts.

The first CITES delegation—a lower-ranking trio—visited Taiwan Nov. 28-Dec. 2. Its report was positive on Taiwan's conservation efforts.

Murray Hosking, a CITES standing committee member from New Zealand, will lead the second CITES delegation to Taiwan around the end of January after the delegation visits South Korea, Le Duc said.

THAILAND

Enforcement of Environmental Laws Urged for Economic Growth

BK1012022393 Bangkok *BANGKOK POST* in English
10 Dec 93 p 4

[Editorial: "Chuan Must Turn Words Into Deeds"]

[Text] Prime Minister Chuan Likphai hit the nail on the head when he declared on Wednesday that his Government did not want rapid economic growth to proceed at the expense of the environment and social development. This praiseworthy pledge came amid predictions that the country's gross domestic product would grow by 8 to 8.5 percent next year, up from anticipated growth of 7.5 percent this year.

But achieving the worthy goal of progress without pain and pollution is going to take a lot more than mere words. One major weapon at his disposal is the Environment Protection Act—a legacy of the Anan Panyarachun administration. It provides the mechanism and opportunity with which to curb the activities of greed-obsessed, influential proponents of development at any cost. But awareness of the spirit behind the act, as well as the law itself, has yet to make much of an impact on the bureaucracy charged with enforcing it.

There is a crying need to educate the educators and launch a well-coordinated environmental awareness campaign among government units and members of the general public. The Act can provide a national blueprint for cleaning and preserving our natural environment, but this will require the kind of firm central direction that Mr Chuan seems to have in mind. To put it even more simply, its provisions must be enforced.

The environment—our air, water, land, forests and other natural gifts of our country—belong to all of us. As we have said before and will stress again, this includes not only the Government and profit-making businesses but also the farmers and the assembly-line workers, city-dwellers and rural villagers, military and civilian. No one among any of these groups has exclusivity. All of us have the responsibility of using resources without wasting them.

Like most people in the world, we have become aware in recent years that the richness of our country is not infinite. There is still, however, little which could be called a meeting of minds on how to deal with this growing problem. To some, it appears that each step forward on environmental matters is met with two steps backwards and there is a disconcerting lack of public debate on many issues which affect us all. Too often they tend to be presented to us as a fait accompli and then the avoidable agonising and demonstrations begin. The saga of the Pak Mun dam—rarely out of the headlines for long—provides a classic example of this.

Although we have a ministry of science, technology and environment there is a feeling that this government body does little more than pay lipservice to major environmental concerns. A broad segment of the population would welcome a ministry with the mandate to monitor and regulate all developments which fall under the general heading of environment but there is little evidence that this exists in an effective form. All concerned agencies should be gathered together under a single roof so they can coordinate with each other and work together, rather than against, each other.

A World Bank report recently noted that pollution in Asia is growing faster than the region's economies. Our economy doubled in size from 1975 to 1988, but industrial emissions grew 8 to 12 times worse, the report says. No clearer indication is needed that it is time to stop the establishment of industries which pollute, and to force present-day polluters to clean up. There is no need for new laws or regulations in most cases. These exist in abundance. The problem is that they also exist in limbo, far too often. Enforcement of existing anti-pollution regulations and those governing illegal building would perform a near miracle to the beginning stage of a true, national environmental awareness campaign. At present we seem to support the principle rather than the act of conserving the environment. Take, for example, the concert outside Khao Yai National Park in October supposedly to promote environmental awareness. The irony was that afterwards the ground was strewn with rubbish.

A ministry or department charged with responsibility for the environment must not only have the powers to enforce these laws and regulations, but be willing to do so, even when this pits them against powerful special interest groups. If the Government is unwilling to use this power, then it cannot claim to be truly concerned about the environment. Such an entity must also be made to be responsive to the will of all Thais because the essence of democracy is that a government is answerable to its people. For a ministry of environment to be effective it must invite public debate. Such transparency would not only be "environmentally friendly"—it would also bring a breath of fresh air to the workings of government in a democratic society.

Only by adopting these measures can Mr. Chuan achieve his commendable goal.

VIETNAM

Government Issues Maritime Product Protection Ordinance

BK1212093893 Hanoi Voice of Vietnam Network
in Vietnamese 2300 GMT 8 Dec 93

[Text] The SRV Government recently promulgated an ordinance on the penalties for violations of the management and protection of the sources of maritime products. The ordinance, formulated at the recommendation of the Ministry of Maritime Products, is aimed at uniformly imposing penalties against violators.

The ordinance is composed of 15 articles in three chapters, clearly defining the acts of violation and forms of penalty against organizations or individuals who violate the law in this regard. The ordinance is aimed at protecting the environment of maritime species, enhancing the preservation and use of maritime products, and promoting fishery and the production of maritime products.

The ordinance also defines the authority of the agencies concerned and the procedures and measures for dealing with violators.

Plan To Prevent Deforestation Shows 'Limited' Results

BK1812154393 Hanoi VNA in English 1503 GMT
18 Dec 93

[Text] Hanoi, Dec. 18 (VNA)—Vietnam now has around 20 million hectares of forests and forestland; but this includes 11.4 million hectares of bare hills and wasteland. Vietnam's forests cover 8.4 million hectares, and have a timber reserve of 657.3 million cubic metres and about 5.5 billion bamboo trees. Of the reserve, timber [word indistinct] bamboo in production [words indistinct] 62 percent and 70 percent respectively. Half of the timber is found in the central highlands and more than 20 percent is in the central coast areas. The [words indistinct] the size of protected forests increases every year, while production forests decline. This is because the rate of destruction is quicker than the growth rate of the trees.

Forests in Vietnam have suffered serious devastation over the past several decades, partly to bombardments and U.S. chemicals spraying during the Vietnam war, but mostly by indiscriminate tree felling for fuel, cultivation and construction, about [words indistinct]. This has led to a higher frequency of droughts and floods due to soil erosion, particularly areas on the coast.

Defoliant used by the U.S. have deprived Vietnam's forests of around 75 million cubic metres of timber worth billion of dollars.

To curb this alarming rate of deforestation, the best approach is to rely on the force of the population. The number living in the forest land is now estimated at 22 million persons.

Efforts have been made in recent years to allocate areas of forest for the long-term use of each farmer household.

However, the results have been limited. Only 13,800 hectares with a timber reserve of 338,000 cubic metres have been allotted to families

National Assembly on Environmental Protection Law

National Assembly Holds Environmental Discussions

BK2112054193 Hanoi Voice of Vietnam Network
in Vietnamese 1100 GMT 20 Dec 93

[Summary] "Dear friends, today the National Assembly held group discussions. In the morning, the National Assembly deputies discussed a draft law on environment protection. In the afternoon, they discussed a draft law on business bankruptcy." You, friends, are invited to listen to the following report on the National Assembly's group discussions on the draft law on environmental protection:

"The National Assembly reserved the whole morning session for deputies to discuss the draft law on environmental protection. The general views expressed by almost all the deputies at their group discussions asserted the need to promptly promulgate an environment law. Many deputies agreed with the goals of the draft law, namely, to prevent and overcome bad consequences caused by human beings and nature; and to rationally regulate the exploitation and use of the environment in support of long-term national construction."

Deputies contributed their views on every single chapter of the draft law. A Kien Giang Province deputy said the contents of the draft law were too general, especially with those measures to deal with environment violations. A Ho Chi Minh city deputy asked that the phrase "The Right to Live in a Healthy Environment Is a Human Right" be added to the preamble.

"The feasibility of this law was fervently discussed by the deputies. Many of them maintained that to make it possible for the law on environmental protection to enter into life, we should delegate localities with more powers, set up a government agency to provide guidance for environmental protection activities, and draw up clear-cut measures to deal with environment law violations."

Deputies from Minh Hai, Kien Giang, Hanoi, and Ho Chi Minh City said environmental pollution in urban areas is now relatively grave due to the presence of many heaps of garbage and the poor maintenance of public toilets.

Agriculturally, deputies from Ha Tay, Hoa Binh, Vinh Phu, and An Giang Provinces also complained about the indiscriminate use of insecticide by peasants, and this, according to them, has adversely affected livestock and food products. Some deputies said overuse of fertilizer and insecticide has resulted in the extinction of almost all of useful creatures in ricefields such as frogs, crabs, and mollusks. A deputy denounced a paint factory in Ha Tay for pouring its industrial waste into the Song Nghe River, polluting it and killing fish in its hatcheries.

Ba Ria-Vung Tau Province Deputy Do Quoc Hung said: *[begin recording]* I think it is very necessary to promulgate this law, especially in the current circumstance. I agree with the proposal that we call this law the law on environmental protection *[end recording]*.

Recommending measures to overcome the state of environmental pollution, Kien Giang Province Deputy Nguyen Duc Thang said: *[begin recording]* In the Mekong River Delta, we should do away with the presence of latrines built along irrigation canals and ditches if we want to keep our environment clean and beautiful *[end recording]*.

Deputies from Ha Tay and Hoa Binh Provinces stated that while our country is stepping up the industrial process and broadening cooperation with foreign countries, the prompt promulgation of a law on environmental protection is very necessary.

Ha Tay Province Deputy Nguyen Phuc Dinh said: *[begin recording]* It is very necessary for the fourth session of the Ninth National Assembly to pass the law on environmental protection. This is because in national industrialization, we must specify which chemicals are toxic and harmful to health and which are not *[end recording]*.

National Assembly Issues Communique on Environmental Protection

BK2712152193 Hanoi Voice of Vietnam Network in Vietnamese 1430 GMT 27 Dec 93

[Communique No. 12 issued by the Ninth National Assembly's Fourth Session in Hanoi on 27 December]

[Text] On the morning of 27 December 1993, the National Assembly deputies held group debates on the draft resolutions that will be presented to the National Assembly for approval at the end of this session.

On the afternoon of 27 December, under the direction of National Assembly Vice Chairman Phung Van Tuu, the National Assembly held a plenary session at the conference hall to pass the Law on Environmental Protection.

The National Assembly heard Mr. Luong Xuan Quy, a member of the meeting secretariat, read a report on behalf of the Secretariat, the Scrutiny Committee, and the Committee that drafted the law on the views contributed by National Assembly deputies regarding revision of the draft law. He also read the full text of the revised draft Law on Environmental Protection.

Next, 32 National Assembly deputies spoke on those articles of the draft law with which they still had differences. These deputies were: Nguyen Dinh Ngo of Thua Thien Hue; Nguyen Dinh Giang of Quang Ninh; Nguyen Viet Dung and Mai Thuc Lan of Ha Bac; Nguyen Minh Quang of Nam Ha; Do Quoc Hung of Ba Ria-Vung Tau; Nguyen Don of Quang Nam-Danang; Vu Dinh Cu and Tran Thi Tam Dan of Hanoi; Co Hoa Van of Lao Cai; Le Thi Thanh Liem and Tran Van Ngau of Ben Tre; Tran Minh Xuan of Khanh Hoa; Nguyen Ngoc Tran of An Giang; Le Khac Binh, Nguyen Tan Phat, Nguyen Van Thanh, Nguyen Thi Ngoc Phuong, and Chu Pham Ngoc Son of Ho Chi Minh City; Dang Huu of Binh Dinh; Pham Hung of Hai Hung; Tran Chu Toan of Gia Lai; Nguyen Duc Hoan of Quang Tri; Bui Ngoc Thanh of Lang Son; Nguyen Xuan Thiet and Dinh Xuan The of Vinh Phu; Nguyen Khac Tao of Ha Tinh; Nguyen Thi Hoai Thu of Tien Giang; Do Van An of Son La; Nguyen Quoc Thuc of Nghe An; Nguyen Van Thanh of Dong Nai; and Hoang Dinh Cau of Ha Tay.

The National Assembly then decided on those issues where there were still differences.

With a high identity of views, the National Assembly voted to pass the Law on Environmental Protection. This important law is designed to keep the environment clean, healthy, and beautiful; improve the environment; ensure ecological balance; prevent and overcome the harmful impact on the environment caused by human beings and the elements; and provide for the rational and thrifty exploitation and use of natural resources.

The National Assembly will continue its session at the conference hall on 28 December 1993.

National Assembly Passes Environmental Protection Bill

BK2812062793 Hanoi VNA in English 0612 GMT 28 Dec 93

[Text] Hanoi VNA Dec 28—Deputies to the current National Assembly session yesterday passed the draft law on environmental protection.

The law composing of seven chapters and 55 articles covers the prevention of environmental pollution remedial measures for environmental degradation and pollution state management and environmental protection international cooperation in environment protection and other relevant provisions. The deputies adopted the law with 325 yes, out of 349 delegates present.

BULGARIA

Joint Environmental Observatory Set Up With French

BR2112113293 Paris LA RECHERCHE in French
Dec 93 p 1319

[Unattributed article: "French-Bulgarian Observatory"]

[Text] An environmental observatory has been set up in the Musala mountains in Bulgaria. This joint French and Bulgarian project was an initiative of J. Stamenov, director of the Sofia Nuclear Research Institute, and J.-P. Carbonnel, head of research at the CNRS [French National Center for Scientific Research] responsible for this project on behalf of the French Environment Ministry. The implementation of this project is the concrete result of the French Embassy's wish to come to the assistance of Bulgarian science. From 19 to 25 September, a summer university made it possible for research workers from the two countries to discuss the results of an initial field campaign to monitor the ecology of the Musala mountain range and consider future cooperation. For example, Meteo-France [French Meteorological Office] will supply two high-mountain meteorological stations, and the University of Franche-Comte will supply a complete set of equipment for continuously measuring radon in water. Moreover, the various Bulgarian laboratories involved will be linked up by a computer network, thanks to funding from the French Foreign Ministry. In order to optimize coordination of the cooperative efforts, a scientific interest grouping (GIS) will be set up this month in Paris.

Romanian Environment Minister Visits, Discusses Cooperation

AU1412182693 Sofia BTA in English 1601 GMT
14 Dec 93

[Text] Sofia, December 14 (BTA)—The chemical plant in Giurgiu has been shut down and will be brought on line only after the waste-treatment installation starts operating and Bulgarian experts establish that the plant will not pollute the air of Giurgiu and Ruse, the Romanian minister for water, forestry, and environmental protection Aurel Constantin Ilie told his Bulgarian counterpart Valentin Bosevski on the first day of a two-day working meeting. Since the early 1980's, the Giurgiu Chemical Plant has been the major polluter of the air of the Danubian city of Ruse.

The Romanian minister came to Bulgaria to work out a regional environmental programme aimed at the lower reaches of the Danube. On the basis of the programme the two ministers will sign a memorandum to the European Union to seek its support for the implementation of the programme.

The sides are pleased with the fact that the two countries are becoming increasingly active in European environmental policy. "The signing of the Convention on Black Sea Protection in Bucharest last year and the forthcoming endorsement of the Danubian Convention, which will take place in Sofia, go to show the will of Bulgaria and Romania

to share in a very important process: the conservation of Europe's natural resources," Mr. Bosevski said.

Further talks between the two ministers will focus on a number of issues related to the finalizing of nuclear safety accords. The Romanian guest proposed that expert teams be set up to work in the sphere of nuclear safety and exercise reciprocal control. The sides are also expected to work out the status and composition of the inter-governmental commission on the implementation of the bilateral agreement on cooperation in environment protection.

Bulgarian, Romanian Ministers Discuss Environment Issues

AU1512133193 Sofia BTA in English 1217 GMT
15 Dec 93

[Text] Sofia, December 15 (BTA)—Bulgaria's Minister of the Environment Valentin Bosevski and Romania's visiting Minister of Waters, Forestry and Environment Protection Aurel Constantin Ilie today initialed the statutes of an intergovernmental commission to supervise the implementation of the bilateral convention on cooperation in environmental protection signed in Romania on May 12, 1993. The commission will hold its first sitting in early February, Bosevski told the press.

The ministers discussed the work on a regional programme for the environmental protection of the lower Danube. We think this programme can now only be implemented with intellectual and financial assistance from the European Union, Bosevski also said. He said this would not be unprecedented, as such programmes are under way in Central Europe.

The ministers agreed to sign in Giurgiu (Romania) on December 27 a memorandum to the EC asking support for the implementation of the Regional Programme for Environmental Protection of the Lower Danube. The memorandum will be handed to the EC by January 15.

"The time of promises has passed. My view, shared by Mr. Ilie, is that we shall be looking for pragmatic models to resolve environmental problems," said Bosevski. He said the Romanian side invited Bulgarian experts to visit the construction site of the N-plant [nuclear plant] in Cerna Voda.

Cabinet Approves Joining Global Environment Facility

AU2012200593 Sofia BTA in English 1804 GMT
20 Dec 93

[Text] Sofia, Dec 20 (BTA)—Today the cabinet approved Bulgaria's joining the Global Environment Facility (GEF) set up by the World Bank to finance major environmental projects. Bulgaria was granted GEF funds under two regional programmes for management of the Danubian and Black Sea environment. The facility helped Bulgaria launch a programme for bio-diversity conservation and improvement of the protected areas control system. Bulgaria's joining the GEF will allow for a more active participation in the facility's management, Minister of

Environment Valentin Bosevski said, commenting on the cabinet's decision. It was clearly stated that it spells no direct financial commitments for this country.

In the 1993-94 period, the GEF extended a total of 150,000 U.S. dollars. This figure is expected to reach 4 million U.S. dollars in 1995-97, which will help implement environmental projects.

'Green Parliament' Adopts 1994 Environmental Program

*AU2812171393 Sofia BTA in English 1533 GMT
28 Dec 93*

[Text] Sofia, Dec 28 (BTA)—The ruling body of the Green Parliament today approved a comprehensive programme for 1994 at its last meeting this year. BTA learned from the organization. It was set up early this autumn by representatives of some twenty nongovernmental environmental organizations. A seven-member bureau was elected at the parliament's setting up to coordinate its activity.

The bureau today outlined major areas of activity in 1994: statutory regulations on nature conservation, programmes for environment-friendly production, raising environmental awareness, and protection for nature reserves.

Ecologists from the Green Parliament are drawing up a programme for environmental protection targeted on the economy. It will be submitted to the Ministries of Industry, Trade, and the Environment, as well as to the Parliamentary Commission for Ecology.

CZECH REPUBLIC

Mayors Refuse To Accept Nuclear Storage Facility

*AU1612071293 Prague CTK in English 2008 GMT
15 Dec 93*

[Text] Rozna, south Moravia, Dec 15 (CTK)—Representatives of fifteen communities in the south Moravian district of Zdar nad Sazavou refuse to allow the Czech Energy Company CEZ to build a storage facility for spent fuel in that region.

The environment there is already threatened enough by uranium mines, settling basins for uranium ore dressing, and a storage facility for galvanic sludge, representatives said. Even the income and the jobs that the construction of a storage facility would bring to the region, whose unemployment rate is above the average for the Czech Republic, would not make up for the threat to the environment.

In the spring a meeting of all the mayors of communities on whose territories the storage facility might be constructed is to take place.

Poll Shows Opinions on Environment, Public Order, Health

*AU2112161793 Prague CTK in English 2111 GMT
20 Dec 93*

[Text] Prague, Dec 20 (CTK)—Czechs would be unwilling to pay higher taxes or to accept a lower standard of living for the sake of protecting the environment, but one quarter would be willing to pay more for products, a new STEM [Center for Empirical Research] poll reveals.

While 26.1 percent would accept higher prices, only 18.5 percent would want to sacrifice their standard of living. Most Czechs feel they "cannot do much for the environment."

In the same poll, when asked to name the most important thing, almost half respondents replied that it was "keeping order in the country" (47.5 percent).

The next most important issues for the citizens of the Czech Republic were "having a greater say in the decisions of the government" (17.9 percent), protection of the freedom of speech (17.8 percent), and stopping price rises (15.2 percent).

The poll included a question on territorial arrangement and local government reform. Some 56.1 percent of respondents said the solution to the problem was important to them, while 43.9 percent said it was not. Twice as many people intending to vote in the forthcoming local elections found the issue important than those not intending to vote.

STEM, the Center for Empirical Research, conducted the poll in the last week of November among 972 respondents.

People's views on the quality of health care in the first year of the independent Czech Republic were the subject of another STEM poll whose results were released today.

Thirty-three percent believe health care has improved, whereas 22 percent think it has worsened.

The biggest problem is felt to be under-funding, while the choice of doctors and the behavior of health care staff towards patients were rated the most positively.

Only 40 percent of those asked regarded themselves as healthy, the others citing minor or major complaints. However, 58 percent felt they were healthier than most of their peers.

The poll also revealed that almost half Czechs use the services of private practices.

STEM asked 1,400 people in the first week of December.

REGIONAL AFFAIRS

Southern Cone Environmental Issues

PY2312132393

[Editorial Report] The following is a compilation of reports on environmental issues monitored by Paraguay Bureau from 14 to 22 December.

ARGENTINA

Congress on 15 December ratified the agreement on biological diversity signed in Rio de Janeiro on 5 June 1992. The agreement's objective is to preserve biological diversity, tap natural resources in a sustainable way, and fairly share in the benefits derived from such exploitation. (Buenos Aires NOTICIAS ARGENTINAS in Spanish 1644 GMT 19 Dec 93)

BOLIVIA

Lumber companies oppose two aspects of the bill on forest exploitation being debated in Congress: the taxes, which they deem too high and the number of years covered by each permit for logging. The companies want the government to give them these areas. Bolivian environmental organizations are against that because they believe it would be like privatizing the national forests. The sustained development minister, however, believes it is logical and acceptable that businesses want to own the logging areas. He added that, otherwise, businesses would not be motivated to spend on projects for sustained management of the forests. The bill includes permits for 40 years of exploitation, but the government wants the bill to consider giving away the areas to be exploited. (La Paz Television Nacional Network in Spanish 0100 GMT 16 Dec 93)

BRAZIL

The Brazilian Institute for the Environment and Renewable Natural Resources, IBAMA, and Salvador prefecture have signed an agreement for opening a new egg-laying area for sea turtles, which will be located at the Itapua ecological camping area. The area will be fitted with two tanks for the preservation of some species. (Brasilia Voz do Brasil Network in Portuguese 2100 GMT 17 Dec 93)

The National Environment Council on 17 December authorized IBAMA to grant Petrobras, Brazilian Petroleum Corporation, a license to drill and operate an oil well in the Piacabucu environmental preservation area in Alagoas. (Brasilia Voz do Brasil Network in Portuguese 2100 GMT 17 Dec 93)

President Itamar Franco has signed an agreement to clean up the Paraiba do Sul River basin. France will cooperate in this project that will cost more than \$3 billion. This river crosses through 78 towns in Minas Gerais, 41 in Rio de Janeiro, and 37 in Sao Paulo, supplying more than 12 million people with water, in addition to generating electricity through the Santa Barbara, Jaguari, and Funil dams. This project is expected to last 17 years. Environment Minister Rubens Ricupero said the technology to be used will be the same as in the Rio Doce Valley basin in Minas

Gerais and Espirito Santo, and that it will count on the technical cooperation of the French Government. (Brasilia Voz do Brasil Network in Portuguese 2100 GMT 22 Dec 93)

Uruguay and Rio Grande do Sul State signed a cooperation agreement on sanitation in the Porto Alegre border area on 21 December. The agreement contemplates the implementation of several joint projects such as maintenance work, the enhancement of water quality, and technological research. (Madrid EFE in Spanish 1628 GMT 21 Dec 93)

CHILE

The Chilean Government on 13 December established an Environmental Fund and the Administrative Council for the Americas that seeks to "promote activities geared to preserving, protecting, or administering Chile's natural and biological resources in an environmentally sound and sustainable way, as well as promoting the enhancement of the survival and development of Chile's infant population." The financial resources for this fund, which amount to \$20 million, come from interest on Chile's outstanding debt with the United States, which has been canceled by the U.S. Government. This council will be made up of 11 members: one U.S. Government representative, four Chilean Government representatives, and six Chilean nongovernmental organization representatives. (Santiago EL MERCURIO in Spanish 14 Dec 93 Economic and Business Section page B2)

The environmental organization "Defenders of the Chilean Forest" has reported that more than 100,000 hectares of native forests have been destroyed in the last few years. According to official data, native forests cover 11 million hectares, 11,000 hectares of which are depleted every year for the production of wood chips, the raw material for computer paper. (Madrid EFE in Spanish 1630 GMT 20 Dec 93)

BOLIVIA

National Smelting Enterprise Starts Pollution Analysis

94WN0094B La Paz PRESENCIA in Spanish
31 Oct 93 p 3

[Text] Oruro, 30 Oct—Yesterday marked the start of the first phase of the environmental measurement plan to determine the level of Vinto Metallurgical Enterprise's pollution. It will involve taking air, water, and soil samples on a 500-meter radius around the national smelting enterprise.

This work has been designed for the first phase of the environmental control program, with backing from the German Government, whose investment will amount to 10 million German marks (approximately \$7.5 million), to be completed by fiscal year 1994.

The environmental control plan will make it possible to learn the real pollution levels, and will serve as a basic factor for future environmental control regulations on the national level, according to Rene Candia Trigo, general manager of the smelting complex.

He explained that the results of the study being made will soon afford the opportunity to achieve regulations for environmental control based on a detailed analysis, and taking all the studies conducted thus far into account.

He claimed that the environmental control program is the metallurgical enterprise's top priority, noting that they are waiting to hear the first results of the evaluation, so as to continue with that program. He maintained that the latter would make it possible to guarantee a production "without pollution, while protecting the population's health."

He added that this work was begun based on the commitment assumed by the mining secretary, Jaime Villalobos, to deal with the region's problem and to provide an opportunity for making environmental audits in the area of environmental pollution, using Oruro as a pilot city.

Indigenous Group Concerned About Lake Contamination

94WN0094A La Paz PRESENCIA in Spanish
22 Nov 93 p 1

[Text] Oruro, 20 Nov—The Oruro Regional Development Corporation (CORDEOR) is striving to achieve the rehabilitation of Lakes Poopo and Uru Uru, to ensure the survival of the Uru Muratos, settlers belonging to an indigenous tribe living on the shores of those lakes.

The current contamination and salinity of Lake Poopo's waters is threatening extinction for the region's flora and fauna. This has evoked concern among the indigenous settlers, who are suffering from a lack of food for their subsistence.

The CORDEOR president, Marcelo Arzabe Vasquez, explained to PRESENCIA that the rehabilitation of Lake Poopo and other nearby lakes is an imminent event. It is based on the plan being carried out with the Joint Bolivian-Peruvian Commission for the Development of the Lake Titicaca Integrated Zone (Subcomilagos), which includes the rehabilitation of the upper and lower basins of the Desaguadero River.

He remarked: "This plan has been handled with special dedication, because we are aware that we must guarantee the natural habitat for the lives of the indigenous tribes and nations, particularly the Uru Muratos who make their living from fishing and hunting on Lake Poopo. Their subsistence fishing is nonexistent, and this is a major concern of our administration."

Lack of Attention

Daniel Moricio Choque, leader of the Uru Muratos, for his part, explained that they know that Lake Poopo's waters are contaminated, and yet this situation does not concern any authorities. He claimed this to be so despite the fact that the atherine [a mackerel species] fishing catch

in 1992 did not exceed 500 kg, compared to 1990's total of 3,000 tons, and accounting for 50 percent of the national production.

During 1991, the atherine production amounted to 2,600 tons. In 1992, 90 percent of the fishing fauna disappeared, and in 1993 there is nothing to fish for, as the indigenous leader explained. He said that this proved to be a difficult situation of those living in the Murato settlements.

The indigenous residents feed themselves with wild ducks from the area but, owing to the water's salinity, they too are becoming extinct. This prompts the prediction that there will soon be total famine.

Currently engaged in raising Aymara sheep, the Uru Muratos are hoping to obtain a small territory in which to devote themselves to farming.

The situation being experienced in the settlements of Punaca, Tinta Maria, Llapallapani, and Willaneque is tragic, because the inactivity caused by the reduction in Lake Poopo's water level and the lack of fish is causing massive migration. This has left the communities as ghost towns, and the schools that existed have been closed. They are waiting for attention from the national authorities to alleviate this situation, which is now added to the poverty and misery of those who have sustained the fishing activity for centuries.

Rehabilitation

To achieve the rehabilitation of Lake Poopo, consideration was given to a study made in 1985, warning of the lake's contamination with heavy metals. The study, conducted by Great Britain's Overseas Development Administration (ODA), announced the results of the chemical and spectrophotometric analyses of samples of water, plants, sediments, and fish from the Poopo Basin.

The analyses have made it possible to establish the fact that this lake was highly saline (in 1985), particularly in the south, where the salinity exceeded 70 percent. These figures are higher than those recorded at Lake Moon, California, one of the best documented saline lakes.

The evidence from all the water, plant, silt, and fish samples indicates that there are extraordinarily high concentrations of all metals in the Poopo Basin.

According to the study, the concentration of dissolved metals in the lake comes from the largest deposits in central Bolivia, such as the Poopo, Monserrat, Avicaya, and Huanuni mines, located no farther than 20 km from the lake.

The strongest evidence of contamination comes from the San Juan Sora Sora River, containing high concentrations of a wide range of metals. It is known that the levels of many metals are toxic for fish, and levels exceeding those permitted have been recorded.

BRAZIL

Experts Discuss River Plate Environmental Problems

PY2912193693 Rio de Janeiro O GLOBO in Portuguese
11 Dec 93 p 25

[Article by Elza Oliveira]

[Text] Foz do Iguacu, Parana—In the Upper Paraguay River (which includes the Mato Grosso marshlands) deforestation and mercury are destroying the local fauna and flora; in Rio Grande do Sul 4 million hectares are in the process of desertification; in the Pilcomayo Basin—encompassing Bolivia, Argentina, and Paraguay—the flow of 98 million metric tons of sediments a year causes silting and flooding.

Those are some of the most critical problems discussed by participants in the First International Symposium on River Plate Basin Environmental Problems, which gathered more than 100 experts from Brazil, Argentina, Paraguay, Uruguay, and Bolivia in Foz do Iguacu during the last four days.

The meeting was sponsored by the Instituto Acqua and attended by French and U.S. experts as well as OAS and UNESCO representatives.

The River Plate Basin—the third largest on the planet—presents problems everywhere. The exploitation of natural resources without appropriate guidelines endangers unique ecosystems such as the Pantanal [Mato Grosso's marshlands], the Mata Atlantica [strip of forests along the Atlantic coast], and the Cerrado [central plateau region]. Besides all this, the River Plate basin is the only one whose rivers flow from a tropical to a temperate region.

In the River Plate Basin live 116 million Argentines, Brazilians, Paraguayans, Uruguayans, and Bolivians whose contribution to their country's GDP's is considerable. With the exception of Bolivia, in January 1995 the other four nations will begin a process aimed at integrating their economies through the Common Market of the South (Mercosur). Rivers will be used as large avenues. Their economic importance also can be measured by their energy-producing capacity: 42,000 megawatts.

Newton Cordeiro, coordinator for South America of the OAS' Regional Environment Department, said: "Changes provoked by agriculture and industry, the existence of numerous dams, and future transportation projects combined with the rain system and the soil quality create risks of flooding, mud slides, and prolonged droughts."

COLOMBIA

Congress Approves Law Creating Environment Ministry

PA1912203993 Santa Fe de Bogota Inravisión
Television Cadena 1 in Spanish 1730 GMT 17 Dec 93

[From the "National Newscast"]

[Text] Colombia will have an Environment Ministry. Congress has approved the law creating it. The law establishes incentives for those who replant forests and severe penalties

for those who contribute toward contamination. High school graduates who are serving in the military may do so in environmental tasks. He who contaminates will pay. This is one of the main purposes of the Environmental Law, which will guard and conserve the country's natural resources from now on but with full collaboration from the community.

[Begin Aduardo Uribe, National Department of Planning Environmental director, recording] The bill creates several ways for community participation. It allows the people who live along rivers and in forests to speak up and participate in the decisions that will affect their environment. [end recording]

Each municipality will design its own environmental conservation plans. They will receive special support from the police, and the attorney general will delegate environmental matters.

[Begin Uribe recording] There are taxes, fines, and penalties established for destroying our natural resources. There are penalties that can be applied and executed by the public forces, municipal and regional authorities, and the Environment Ministry. According to the law, these entities now have police functions. [end recording]

The project takes off using a \$25-million IDB loan followed by the government's contribution. A new aspect of the law is that 20 percent of young enlisted men will be allowed to serve in ecological tasks. There are also awards for those who restore the environment by planting all types of plants and introducing animal species. The government will absorb up to 75 percent of any restoration efforts.

JAMAICA

Government Seeks 'Environmentally Protected Area' Status

FL2012173393 Bridgetown CANA in English
1554 GMT 20 Dec 93

[Text] Kingston, Jamaica, Dec 20, CANA—The Jamaica Government is taking steps to have the island designated, "an environmentally protected area," Environment Minister Easton Douglas has said.

Speaking to the state news agency, JAMPRESS, Douglas said the move is to protect the island's delicate ecology, regarded as "a national asset." The environment minister said his government also intended to institute a licence, which would be necessary for any type of significant development, industrial or otherwise, of interest to the environment.

The Natural Resources Conservation Development Authority (NRCA) would be the body responsible for granting such licences, Douglas said. And there would be close collaboration with the Town and Country Planning Department to avoid duplication and to better co-ordinate and speed up the process, he added.

Douglas repeated previous announcements that steps were being taken to have the Cockpit Country and the Black River area designated as national parks. He observed that

action would soon be taken to clean up the Kingston Harbour which was badly polluted in some parts. The main contaminants are sewage and chemical residue from the 21 gullies and mains which emptied their contents into it. The environment minister also said the city's sewerage system is to be upgraded.

MEXICO

Ecological Commission, Bank Created Within NAFTA

PA2812031593 Mexico City NOTIMEX in Spanish
2139 GMT 27 Dec 93

[Text] Mexico City, 27 Dec (NOTIMEX)—Mexico today promulgated the Border Ecological Cooperation Commission [Comision de Cooperacion Ecologica Fronteriza] and the North American Development Bank [Banco de Desarrollo de America del Norte] that will start operating on 1 January 1994 with the implementation of the North American Free Trade Agreement [NAFTA].

The decree promulgating the agreement between the two countries established that the goal of the commission and the bank is to support the protection and upgrading of the environment at the U.S.- Mexican border.

The agreement creating the two institutions was approved by the Chamber of Senators on 16 December and was promulgated today through its publication in the federation's official newspaper. The text of the agreement underscores the importance of preserving, protecting, and improving the environment for the sake of present-day and future generations and the urgency of addressing ecological problems at the U.S.-Mexican border. The United States and Mexico agreed to create the commission and the bank within the framework of NAFTA, which includes Canada. The U.S. Government promulgated NAFTA on 8 December.

The agreement underscores the need to establish an ecological infrastructure at the border, especially in contaminated areas, as well as the need to treat sewage water and solid waste, among others. The agreement states that the commission's goal is to support the preservation, protection, and improvement of ecology at the border area to increase the well-being of the people of Mexico and the United States. The commission will also cooperate, as required, with the North American Development Bank, other national and international institutions, and sources of private investment capital in the development of ecological infrastructure projects in the area.

The commission will participate in the drafting, development, implementation, and supervision of those projects and will analyze the financial or environmental feasibility of such plans, and will evaluate the economic and social benefits of ecological infrastructure projects in the area.

The commission will have a directorate, two managers, that is, a general manager and a deputy general manager, an advisory council, as well as the officials and personnel it requires to carry out its duties. It will also have legal status

and full power to sign contracts, purchase and transfer personal property and real estate, and start legal procedures.

The commission will issue a yearly report on its operations in Spanish and English that will be drafted by the general manager and approved by the directorate. Copies of the report will be available to the people of the two countries. The commission will be in operation until one of the parties decides to withdraw, and this party is able to do so six months after filing a written request.

The North American Development Bank will finance projects certified by and at the request of the commission and will be assisted by the commission in the achievement of its goals and fulfillment of its duties. In carrying out its duties the bank will use its own capital, funds obtained in financial markets and other available resources, and will promote the investment of public and private capital in companies and activities with ecological purposes.

The agreement states that the bank will have initial capital of \$3 billion divided into 300,000 shares, each one with a nominal value of \$10,000, and they will be at the disposal of the parties. Of that total, there will be \$450 million in paid-up shares [liberadas] and \$2.550 billion in not fully paid-up shares [pagaderas]. The agreement states that Mexico and the United States each will own [suscribirán] 22,500 paid-up shares and 127,500 not fully paid-up shares for a total of 150,000 shares each and a grand total of 300,000 shares between the two.

VENEZUELA

President Announces Protest of U.S. Rules on Oil Imports

PA1812035493 Caracas EL UNIVERSAL in Spanish
17 Dec 93 p D-4

[Report by Rosita Caldera]

[Text] The executive branch is scheduled to issue a formal letter of protest to the United States as its first response to the U.S. EPA's new marketing guidelines for unleaded [reformulada] gasoline. President Ramon J. Velasquez announced the government's decision in exclusive statements to EL UNIVERSAL. Velasquez said the country will certainly feel the impact of the U.S. move, which is why Venezuela will undertake "every appropriate measure to correct this situation."

President Velasquez received a report from Simon Con-salvi, the Venezuelan ambassador in Washington, informing him of the new gasoline guidelines in the United States. When the guidelines go into effect in January 1995, the measure will force Venezuela to stop selling some 50,000 barrels of oil a day to the United States. According to the president, such a loss undoubtedly will adversely affect the country's financial situation. The decision forces us to begin actions to prevent the implementation of this measure. It contradicts the United States' proclaimed policy of free trade and economic integration. With this measure, Venezuela feels its economic interests have been damaged. Moreover, this policy contradicts Article 3 of GATT. For

this reason, Venezuela, as a GATT member, should denounce before GATT this unfair trade policy affecting our exports.

The official statement the government will issue today will be drafted in almost the exact terms used by President Velasquez in making his statements to EL UNIVERSAL. The government will insist the U.S. measure is at odds with Venezuela's rightful desire to maintain its current export levels. Moreover, we have a year—from now until January 1995—to continue pressing our just demands, the president added.

Government, Colombia Implement Basin Preservation Accord

PA2912133293 Caracas EL NACIONAL in Spanish
28 Dec 93 p D-2

[Report by Jose Marin]

[Text] Maracaibo—The Venezuelan and Colombian Governments have started to implement an agreement signed in Washington by the ambassadors of the two neighboring countries which calls for the preservation of the Catatumbo Hydrographic Basin.

At a binational meeting held recently in Cucuta the parties agreed to establish, after 17 years of talks, a technical committee to exploit and preserve the basin of the Catatumbo River, which "has been damaged by irrational exploitation by the two countries of their respective upper

basins," said Omar Baralt, president of the Venezuelan Presidential Commission on Border Affairs.

Baralt said that the Catatumbo River, with its headwaters in Colombia and its drainage into the sea in Venezuela, is an ecosystem that supplies 60 percent of the fresh water that flows into Lake Maracaibo. "We have high stakes in this," he warned.

Colombia rejected in the beginning any understanding claiming principles of sovereignty, because it argued that Venezuela was merely offering it participation in the preservation of that basin.

Baralt added that "in view that no agreement was reached then, we insisted over the past 17 years and managed to reach an agreement with OAS assistance to settle sovereignty problems between the two nations."

This agreement states that the two nations, through the OAS, will preserve the basin by implementing a medium-run comprehensive plan.

Omar Baralt added that in that zone "not only the basin is being destroyed but there is heavy contamination of the river, because the Departments of Santander and Norte de Santander, which contain 85 percent of the population estimated at between 6 and 8 million inhabitants, are along the Catatumbo River."

The president of the commission on border affairs also voiced his concern over the exploitation of coal, which is highly contaminating, which was detected in the Catatumbo Basin.

REGIONAL AFFAIRS

Arabs Propose Worldwide Tax for Environmental Protection*NC0712143193 Paris AFP in English 0849 GMT / Dec 93**[By Nadim Kawash]*

[Text] Abu Dhabi, Dec 7 (AFP)—Arab states, which control 60 percent of global oil reserves, are proposing a worldwide tax that could raise more than four billion dollars a year to protect the environment.

The idea is seen as a "fair" alternative to a proposed European Community energy tax, which has caused alarm in oil-producing states on the grounds it would slow down demand for crude and depress their earnings.

"There are several more effective and fair alternatives to the taxes on oil products," Arab states said in their 1993 joint economic report, prepared by the Organisation of Arab Petroleum Exporting Countries (OAPEC) and two other regional organisations.

"The first is the imposition of a worldwide income tax of 0.25 percent, which could fetch around four billion dollars a year in the industrial countries and 750 million dollars in developing nations."

"The sum could be used to clean and protect the environment."

It is the latest in a series of Arab proposals to persuade the 12-nation E.C. to steer away from its planned tax, which the community says is designed to protect the environment by containing the emission of carbon dioxide.

But Arab and other oil producers charge the E.C.'s real aim is to secure extra revenue to tackle domestic budget deficits.

Reservations from Britain and other E.C. nations have held up enforcement of the tax, which will levy three dollars on every imported barrel of oil, to rise to 10 dollars by the year 2000.

"Imposing taxes on oil products will not protect the environment nor will it curb crude imports," said the Arab report, part of which was carried by the official Kuwaiti news agency KUNA.

"They will only achieve large increases in government revenues in industrial countries at the expense of oil producers."

Gulf Arab states have strongly attacked the tax on the grounds it would affect them most as oil accounts for nearly 90 percent of their income.

Around four million barrels per day (b/d) of their oil output goes to the E.C., while 2.8 million b/d are exported to Japan and two million b/d to the United States.

One of the scenarios on the effects of the carbon tax on Gulf Cooperation Council (GCC) states is that it will depress their earnings by 14 billion dollars a year, hurting their development plans.

The revenues of GCC states—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates—are already under pressure from a sharp decline in oil prices.

Since 1981, their earnings have been slashed nearly threefold to 70 billion dollars in 1992.

"Definitely, Arab oil and gas exports will be hurt by the policies of the industrial nations," said the Arab report, also prepared by the Arab Monetary Fund and the Arab Fund for Economic and Social Development.

"Imposing taxes on oil products will also boost consumption of coal and burning of wood, which will cause further damage to the environment."

It said Arab oil exports stood at 38.3 percent of the total world crude exports of 39.7 million b/d in 1992, while natural gas exports accounted for 12.1 percent of the total world gas supplies.

Multilateral Talks Agreement on Agricultural Projects*NC1612101493 Cairo MENA in Arabic 1905 GMT 15 Dec 93*

[Excerpt] Cairo, 15 Dec (MENA)—A working group formed by the Middle East Multilateral Talks Economic Development Committee ended its meetings in Cairo today. It approved several projects that will be implemented in cooperation with the EC and Middle Eastern countries.

The Cairo meeting is the first of several planned by the Economic Development Committee during its meeting in Copenhagen on 8 and 9 November. A program called the Copenhagen Work Program was drawn up then.

The agreement reached today provides for four agricultural projects to be implemented with the cooperation of Egypt, the occupied territories, Israel, and Jordan. Agreement was also reached to implement a project involving cleaning up pollution in the Gulf of Aqaba and preserving marine life and coral. This project will be carried out with the help of the gulf's littoral countries. Agreement was also reached to carry out a joint tourism project involving Egypt, Israel, and the occupied territories.

Dr 'Adil al-Biltaji, chairman of the board of directors of the Egyptian Agricultural Research Center and Egypt's representative at the meeting, told MENA that agreement was reached to establish four networks through which expertise and data will be exchanged with the aim of promoting research in various spheres.

Dr. al-Biltaji explained that the first sphere is connected with natural resources, notably desert plants, and ways of protecting them. He said each regional country will make efforts in one particular sphere and all the resulting information on available natural resources will be exchanged and coordinated. He said this project will be carried out through the joint efforts of Egypt, Israel, Jordan, and Turkey and in coordination with Italy. He added that the EC will provide financial backing for this \$125-million project.

Dr. al-Biltaji said the second project is connected with the effects insecticides have on the soil. The aim is to minimize the use of insecticides and prevent harm to people, plants, and natural resources like water. [passage omitted]

INDIA

Fund To Aid Phaseout of Ozone-Depleting Chemicals

94WN0098A Madras *THE HINDU in English*
16 Nov 93 p 9

[Text] New Delhi, Nov 15: India is to get Rs 6,000 crores from the global fund dedicated to the Montreal Protocol to help implement a plan to phaseout the use of chlorofluorocarbons (CFCs) and other ozone destroying chemicals.

The country programme prepared by India, with the help of UNDP and the cooperation of Indian industry, was recently approved by the executive committee on country programmes under the Montreal Protocol. Under the Protocol, the entire incremental cost of the phaseout in India, whose annual consumption of the environmentally damaging chemicals is less than 0.3 kg per capita, is to be met by the global fund. The Rs. 6,000 crores approved is the first part of the payment.

India is unique among developing countries as it is self-sufficient in the production of chlorofluorocarbons and is expected to soon produce halons in sufficient quantities to meet the domestic demand. In 1991 the total consumption of the harmful chemicals in India was about 10,000 tonnes. By the year 2010, the demand and consumption is expected to rise to 1,84,000 tonnes. A large part of the increase is expected in the airconditioning and refrigeration industries.

Developing Countries' Export of CFCs Urged

94WN0097A Bombay *THE TIMES OF INDIA in English* 18 Nov 93 p 4

[Text] New Delhi, Nov 17 (PTI): India has urged the bureau of parties to the Montreal protocol that the CFC producing developing countries should also be allowed to export CFCs to the consumer countries during the phase-out period of Ozone depleting substances (ODS).

Under the protocol provisions, only the developed countries are allowed to export CFCs. India, China and Brazil are among the developing countries which are in a position to export CFCs.

Delivering his presidential address at the concluding session of the fifth meeting of the bureau of the parties to the Montreal protocol in Bangkok today, the minister of environment and forests, Mr Kamal Nath, said that this would help reduce the burden on the developing countries as well as on the multilateral fund.

This would also help accelerating the process of phasing out of the ozone depleting substances.

Mr Kamal Nath lays down his office as chairman of the bureau at the end of his one-year term today.

Mr Kamal Nath said that the provisions of the protocol should be so amended that the early reduction of ODS did not become a disincentive. In fact, such efforts needed to be recognised and rewarded, rather than be allowed to become a punitive constraint in future.

Expressing deep concern over the development of technology and its transfer, the minister suggested that the effort should be widened by roping into the process more scientific and technical institutions, particularly in the countries where the appropriate technologies were to be used.

He pointed out that the denial of funds for research and technology development would amount to the protection of commercial interests of a few and not the environmental interests of all.

Stressing the need of rigorous control over the demonstrable essential uses of halons, Mr Kamal Nath said that it must be borne in mind that many developing countries did not have access to the halon substitutes available to the developed countries.

These realities must all receive due consideration, including when deciding upon the location of halon banks. The halon-producing developing countries should be involved in the development of halon banks, he said.

Mr Kamal Nath cautioned that with the greater integration of the global economy and the on-going liberalisation process in several parts of the world, it should be ensured that ODS-using equipment that would become technologically obsolete, or the use of which was legally restricted, in the developed world was not dumped by unscrupulous elements onto projects in developing countries.

Each country would have to evolve suitable mechanisms to ensure this. But simultaneously, while approving projects, the executive committee would also have to ensure that ODS-using equipment was suitably prevented from recirculation, he said.

Reviewing with satisfaction the last one year's progress under his chairmanship, Mr Kamal Nath said a total of 122 countries had signed the protocol.

The executive committee has so far approved 27 country programmes for phasing out ODS and sanctioned projects and activities worth a total of \$200 million. India's country programme worth \$2 billion was approved by the committee last week in Bangkok.

The minister stressed the need for adequate and timely replenishment of the multilateral fund and requested that contributions to the full extent of the agreed target amount be made with a sense of urgency.

REGIONAL AFFAIRS

Russia-Kazakhstan Agreement on Semipalatinsk Test Site Criticized*94WN0109B Moscow ZELENYY MIR in Russian
No 28, 1993 p 13*

[Article by V. Vasilenko, chief of the council of experts for issues of social ecology, the Nevada-Semipalatinsk International Antinuclear Movement, in the "Opinion" column: "Atom in Our House. The Ecological Status of Test Sites and the Nuclear Industry"]

[Text] ...Still new instances of dangerous pollution of territories are being revealed, whereas the elimination of the risk zones is proceeding slowly because old "debtors" are in no hurry to assume responsibility for their mistakes before the people. Moreover, even the relapses and stereotypes of a militarist ideology survive.

The public has become aware of draft agreements between the Russian Federation and the Republic of Kazakhstan concerning procedures for the use of test sites and joint activities for the conversion and subsequent use of the facilities of the former Semipalatinsk nuclear test site. An analysis of the draft agreements indicates that no review of the documents by ecological-law experts has been administered, i.e. the conformity of the documents to the principles, norms, and articles of the laws of the Russian Federation and the Republic of Kazakhstan concerning environmental protection has not been evaluated.

We cannot fail to take into account the fact that, from the ecological point of view, military test sites form a specific and specialized type of use of natural resources within the Earth's biosphere whereby the means of the forcible conduct of politics, armaments, and all technologies (nuclear, chemical, physical, mechanical, bacteriological, climatic, and possibly others) are used to destroy natural components and eliminate live species and people within their active zone, which means are extremely dangerous for humanity.

Following Rio-92, which adopted new principles of ecological security, all countries of the world should revise the principles of their international relations, all the more so because the problem of the survival of civilization has become an absolute priority from the point of view of the global problems of humanity, of which the ecological problem is one.

The ideology for the joint use of territories (ecosystems) for test sites should be ecological rather than military (militarist). The peculiarities and specialization of each test site should be clearly specified, set forth, and mapped out in terms of all characteristics and parameters. The special ecological status of this type and form of the use of natural resources shall be based on a strict regulatory ecological framework, ecological and legal control norms, and instruments firmly restricting possible and permissible military and other destruction so as to preserve nature and to not damage the ecological systems of the Earth's biosphere and man on a local scale, to say nothing of global.

Kazakhstan has already paid too dearly for the militarist ambitions of the totalitarian system, and it is still paying. This will be a forced payment until such time as Kazakhstan and the Russian Federation implement an ecological conversion of the nuclear power industry and the nuclear industry in general, including such facilities as the Semipalatinsk nuclear test site. Kazakhstan in whose lands a war has never originated could become an international center for the ecologically safe (natural) development of nuclear technologies, at any rate for the period in which the raw materials accumulated in the course of the nuclear race are used by nuclear power stations. Therefore, for this idea to be implemented, all test sites in Kazakhstan and Russia should be transparent to the public, independent expert review. This is why the agreements should provide for ecological observers. This will facilitate the demilitarization of the consciousness of the politicians, the military, and the public alike and the overall ecological friendliness of the use of national resources. In general, military test sites should have the necessary engineering and ecological equipment and instruments for all types and forms of the evaluation of the impact of explosions and all technologies on the biospheric environment, ecosystems, and man within them. In this sense, former military test sites should functionally become ecological test sites.

In conjunction with this, the issue of the ecological status of the Semipalatinsk test site (SIP) acquires particular social, political, and legal significance. With the issue of the SIP raised in this manner, we should be discussing joint activities in the ecological retrofitting and ecological conversion of the SIP facilities rather than their transformation. This is also a fundamental issue because the forms and methods of eliminating the consequences of explosions, prospects, priorities, and directions for the development of nuclear power generation and the nuclear industry in general hinge on it.

Taking into account the above arguments, we believe that it is legally justified to raise the issue of openly carrying out an independent, public ecological expert review and public control in the area of environmental protection under the aegis of the Nevada-Semipalatinsk International Antinuclear Movement, its committee on issues and expert councils of scientists. Articles 40, 42, 48, 49, 55, 59, 61, and 62 of the Law of the Republic of Kazakhstan on the Protection of the Natural Environment give us this right, and we are informing the population about this.

As we see it, all the enumerated problems compel us to make fundamental revisions in general in the "Management and Planning Chart for Conducting Research and Testing by the Ecology and Emergency Scientific-Research Complex," which does not even make a reference to either the Ministry of Ecology and Biological Resources or the International Antinuclear Movement.

We propose a different version of the management chart which, in addition to taking into account the place and role of the Ministry of Ecology and Biological Resources, the Nevada-Semipalatinsk International Antinuclear Movement, should provide for subdivisions to not just control

ecological consequences but to provide ecological services to the test site and its zone of impact in general.

In view of the "contribution" of nuclear energy to the grave ecological situation in Kazakhstan, we consider the issue of setting forth the ecological status of the Republic of Kazakhstan National Nuclear Center as an institute and sector for special use of natural resources to be topical. In the legal and political aspect, this issue is topical for the corporation of the nuclear power industry and the nuclear agency because it is associated with the issue of developing the concept of nuclear law as law on the specific use of natural resources by the sector.

This issue is politically and legally topical for Kazakhstan and CIS countries in general because no effective special institutions have been created in them to defend the ecological rights of the population in the zones of extreme impact of technical origin and even in the already announced disaster zones. As a result, for example, ecological rights of the citizens of Kazakhstan proclaimed in Article 7 of the Law on the Protection of the Natural Environment are not actually defended by anyone, and are violated right and left. In the sector and at the enterprises of nuclear power generation and in the nuclear industry this violation is currently expressed in the extremely slow elimination of radioactive contamination and the consequences of pollution and radioactive exposure of the population; control over the use safety is lacking at the locations of mining, processing, and even transportation and burial of waste.

At present, the ecological situation in the republic and the sector is such that, in our view, it is necessary to develop and pass a law on the liquidation of the consequences of nuclear explosions (military and regular industrial) carried out in Kazakhstan, socioecological rehabilitation of the population and disaster territories, zones, and regions, ecological conversion of defense installations, and ecological retrofitting of the nuclear industry. This law should provide for a comprehensive ecological regimentation of all work in the sector and the development of nuclear power generation and the nuclear industry in general; from the socioecological point of view, they have been developing by the trial and error method to this day. The first legal act of ecological law has been passed (for now, only with regard to sufferers in the Aral Sea area). However, this is merely the beginning of a gigantic effort to solve the most complex problems of social ecology.

Caspian Littoral States Urged To Coordinate Ecological Efforts

94WN0110A Moscow IZVESTIYA in Russian
11 Dec 93 p 15

[Article by Vladimir Kuleshov: "The Aral's Fate for the Caspian?"]

[Text] Ashgabat—O. Ovezgeldyyev, the author of the concept of a long-term program of research into the problems of the Caspian and well-known Turkmen academician, declares: "Unless an international center coordinating the actions of the Caspian countries to save the Caspian is

formed in the very near future and unless these countries pool their scientific, economic, and legal forces to this end, we will simply lose it, like we lost the Aral."

Having become a stamp of industrial enterprises' toxic waste, the Caspian is today essentially suffocating from phenols, acids, alkalis, and organic substances. Scientists believe the overall volume of harmful effluent long since exceeded the annual flow of such rivers as the Ural, Terek, Kura, and Samur put together.

Added to the grim ecological situation is concern that the constant rise in the sea level since 1978 continues. In the current situation immediate coordinated actions of the five states with an outlet to hoary Khazar—Turkmenistan, Kazakhstan, Russia, Azerbaijan, and Iran—are required.

We had become so accustomed to and comfortable with the practice of the wasteful use of natural resources that in unthinkingly and unhesitatingly having closed off by a sealed dike the Kara-Bogaz Bay and having thereby interrupted the natural process of accumulation of hydro-mineral raw material in the bay it did not even occur to us that we were thereby ruining a renewable source, most unique on a world scale, of chemical resources. With the closing off of the bay the natural balance in the region was disturbed for it was not just something but Kara-Bogaz-Gol, as the thermal regulator of the Caspian, which mainly stabilized the level of the sea.

"Had Turkmenistan been able to comprehensively assimilate the unlost Kara-Bogaz-Gol," Academician O. Ovezgeldyyev says, "this would have been sufficient for putting together a fully balanced state budget. And no oil or gas would have been needed here since types of raw material that are much more efficient than hydrocarbons could have been recovered from the bay. Look, the Japanese are spending immense resources to recover minerals from the ocean. We in Kara-Bogaz-Gol, on the other hand, could get them practically free of charge...."

Another well known scientist, A. Khodzhamamedov, president of the Academy of Sciences of Turkmenistan and head of the Institute of Chemistry of the republic's Academy of Sciences, is insistently recommending to the leadership of his country today that the Caspian be plugged into the economic and mineral-raw material base of Turkmenistan. But he warns here that it will be very, very dangerous if each Caspian country begins to view the Caspian and its possibilities individually, without coordinated actions. The predatory catch of fish, the barbaric production of oil on the shelves, and the nonstop discharge of industrial effluent into the rivers feeding Khazar, as the Caspian was called in ancient times, would begin in this case. Agreed ecological norms and an international center for study of the problems of the Caspian are needed to prevent this.

There is, strictly speaking, none of this as yet. No Caspian state has yet embarked in earnest on a monitoring of the level of the sea or a geological inspection of its depths, not to mention the elaboration of scientifically substantiated ecological norms.

European Union's Research Projects in Chernobyl Region Viewed

BR1512142293 Paris LE MONDE in French 15 Dec 93 p 14

[Article signed J.-P.D.: "Sixteen Research Projects In Cooperation With the European Union"]

[Text] Many companies are already cooperating with the authorities in the Chernobyl region. A research center—the CHERCIR [Chernobyl Center for International Research]—has opened at the site under the aegis of the IAEA [International Atomic Energy Agency]. The European Union, which has been working there since 1990, decided to go further and in June 1992 signed an accord with Belarus, Ukraine, and Russia.

Since 1991, Europe has invested a total of ECU14.2 million (Fr95 million) in order to finance 16 research projects. A laboratory is currently being set up in the exclusion zone and an office and housing facilities are available to researchers at Zeleny Mys, on the edge of the zone. Together with health problems, much of the work is devoted to mapping out the contaminated areas, modeling the transfer of radioactive nuclides from the soil to plant life and then to animals and man, the study of their migration in the soil and the water systems, decontamination tests, etc. The researchers certainly have their work cut out. At the time of the accident, the "liquidators" had other concerns than the long-term protection of the environment. Reactor waste, the earth removed from the most contaminated areas, and the trees from the "red forest" burned by radiation were all buried, high and low radioactive waste all mixed in together. A total of 24 sites with 840 pits or trenches containing waste have been identified in the exclusion zone (10 km around the nuclear plant), explains Boris Prister, first deputy to the Ukrainian minister responsible for Chernobyl: "Studies are being carried out to determine if this waste must be treated separately from or included in the new entombment project."

In the meantime, readings have already shown a certain plutonium contamination (37 becquerels per liter) of the water circulating beneath the "red forest" burial sites. The ditches in this area which contain the waste have, however, been lined with clay—unlike those at other sites. "I do not believe that there is an immediate danger, but serious problems could arise within 10 to 15 years," believes Jaak Sinnaeve, head of the "Research Actions for Radiological Protection" unit at the European Commission. "In any event," he adds, "there is an urgent need for a thorough inventory." For the moment, the river Pripyat, which flows into the Dnieper and which could therefore contaminate the Kiev basin, is protected by a "geotechnical barrier" (waterproof underground wall) some 2.1 kilometers long. But that is no more than a temporary measure.

"In the short term, it is the strontium 90 which is causing us the most concern, because it is soluble and thus migrates much more easily than cesium which is insoluble," explains Boris Prister. "After every period of heavy rainfall, we see major increases in the strontium concentration

in the river." This is all the more worrying as the sandy soil favors the migration of radioactive nuclides, adds Nikolay Arkhipov, an expert in nuclear contamination who has been working at Chernobyl since May 1986, after having spent nearly 30 years studying the effects of the Kyshtym nuclear catastrophe in the Ural Mountains.

"We want to pursue genuine cooperative research," explains Lucien Cecille, project coordinator for Europe. "There is an enormous amount which our radiation protection researchers can learn. They could come here for several months each year. One day, we also hope to extend this network of laboratories to include the Kyshtym site." Rather an ambitious objective, perhaps. Although professing a commitment to cooperation, the project leaders from the three countries do not always show great enthusiasm for cooperating in the field. The Ukraine-Belarus border, which is to the north of the 30 km exclusion zone around Chernobyl, sometimes seems impenetrable for men and information.

RUSSIA

Danilov-Danilyan on Need for Environmental Aid From West

94WN0109A Moscow ZELENYY MIR in Russian No 28, 1993 p 2

["Abridged" interview with V.I. Danilov-Danilyan, minister of environmental protection and natural resources, by NEZAVISIMAYA GAZETA correspondent D. Frolov under the rubric "Opinion. ZELENYY MIR Files"; place and date not given: "Russia in an Ecological Zugzwang"]

[Text] Minister V.I. Danilov-Danilyan told NEZAVISIMAYA GAZETA correspondent D. Frolov: "We and the West alike need Western aid."

Danilov-Danilyan: ...Dozens of cities in Russia have absolutely impermissible indicators of air pollution. If we omit the word "absolutely," the number of such cities will come...to 110. These are not some kind of provincial towns but rather large industrial and administrative centers, including the capital city. In many places, pollutants are superimposed over one another in a way: transportation generates nitrogen oxide and carbon monoxide, the iron and steel industry generates sulfur dioxide and benzopyrene; the chemical industry generates formaldehyde, phenol, and aromatic hydrocarbons. The cumulative effect of this cocktail is menacing, and the residents of cities such as Kemerovo, Nizhniy Tagil, Sverdlovsk, Perm, Chelyabinsk, and Saratov suffer incredibly because of this.

Most bodies of water are in an impermissible condition. The Volga is no longer a great Russian river but, by analogy with the Danube, which is called "Europe's cesspool," it fully merits the name of "Russia's cesspool." The Ladoga, Omega, Neva, North Dvina, and virtually all rivers of the Urals are polluted.... The Bering and Kara Seas have become a cemetery for decommissioned nuclear reactors; a favorable situation in regard to radiation is out

of the question there. In general, radioactive contamination is our worst ecological problem: There are Chernobyl, Kyshtym, and dozens of oblasts with poorly controlled storage facilities.

Frolov: It would appear that the list of our ecological troubles could go on forever. As you see it, what kind of resources will be needed in order to contain, if not eliminate all of this?

- **Danilov-Danilyan:** If monetary terms are at issue, it is very hard to make this assessment. For example, how can we appraise the extinction of a biological species or the damage done to a genetic pool? Of course, it is possible to count the dead forests, sick leave, and losses caused by the corrosion of metal. However, the result will be far from the truth.

As far as containment is concerned, this is a major problem indeed, because we are increasingly posing a danger to our neighbors. This is not necessarily a catastrophe on the scale of Chernobyl during which dozens of foreign radiation control stations recorded a leap in the radiation background. For example, our Pechenganikel and Severonikel combines are the main source of air pollution with sulfur dioxide in Scandinavia which affects Norway, Finland, and to a lesser degree Sweden. There is a draft to retrofit the combines by the Finnish company Outokumpo which will cost \$640 million. Of this, Finland and Norway are prepared to pay \$100 million and to extend credit for the rest which will be repaid with the products of the combine. Economic calculations have shown that the combine will not be recouped on such terms either. I raised the issue of looking for additional sources of financing with the ministers of ecology of these countries, and by all signs, they are prepared to do it.

Frolov: Therefore, previously it was customary to refer to international ecological cooperation, whereas at present it makes sense to talk about Western ecological aid. What could it be about?

Danilov-Danilyan: First of all, investment, technology, and know-how, and, to a lesser degree, consultation and training. Most unfortunately, everything happens the other way around.

At present, Russia lacks money rather than brains. Large investment into major transformations at a multitude of enterprises is needed to improve the situation because expenditures at the early stages of technological processes are the most effective.

It is necessary for ecological programs to cooperate with other commercial activities of foreign companies in our territory. We should grant all manner of preferences if they are prepared to finance such programs, and not at their own facility which is simply mandatory under the contracts, but in other areas not directly associated with the facility.

Not only we, but the West itself needs for us to receive Western aid. At present, they are discussing in earnest, and justifiably so, the prospects of global warming which does not promise humanity anything good. It develops because

of the accumulation of greenhouse gases in the atmosphere, primarily carbonic acid which is generated in the process of combustion of energy resources. It turns out that it is profitable for all developed countries to invest funds in...planting forests in Russia rather than retrofitting their quite clean industry. Forests are a powerful drain on carbonic acid. One hectare will eliminate an amount of it which could not be cut back by investing the same funds in retrofitting any of the worst enterprises in any developed country. Besides, there is nowhere else to plant forests but in Russia....

Frolov: Will we be able to rescue our ecosphere ourselves if aid is not provided for one reason or another?

Danilov-Danilyan: All data obtained in recent years prompt me to respond in the negative: Perhaps, we will not be able to. Irreversible changes in natural systems and the gene pool will occur faster than the economy developing without Western aid can become strong enough to restore nature. Nature cannot wait, and if things develop at the same pace, one generation from now there just will not be anyone to pull this weight. We have faced an ecological zugzwang, and have been dealt a blow which is the hardest to deflect from a direction that we have thought about the least.

Komsomolets Submarine Containment Project To Begin in 1994

94WN0100C Moscow OBSHCAYA GAZETA
in Russian 12 Nov 93 p 3

[Article by Igor Filimonov under the rubric "Ecology": "Underwater 'Groundskeepers' Promise Us an Opportunity To Rest Easy"]

[Text] It was resolved at a meeting of an interdepartmental commission for ecological safety to embark on preservation of the Komsomolets nuclear submarine, which rests at the bottom of the North Sea.

At the outset there were several drafts. Over a period of three years a 30-volume work submitted by the Committee for Special Underwater Projects of the Government of Russia was selected on a competitive basis. More than 40 organizations took part in developing it. Specialists rejected the proposed scenarios for raising the Komsomolets. The reactor of the nuclear vessel is shut down and does not pose any danger. In addition, the gas which ensures a certain pressure level inside the reactor is subject to considerable outside pressure at a depth of 1,700 meters. If the Komsomolets is raised, the existing equilibrium will be disturbed. The danger is real that gas will force out a kind of "radioactive broth" which will cause pollution of the sea. This was not the least important reason why the project to seal two torpedoes with warheads which pose the greatest danger was preferred.

A special compound made of crab shells will be pumped into the unsealed torpedo tubes. Tengiz Borisov, one of the authors of the draft and the chairman of the Committee for Underwater Projects, is convinced that the use of such unique technology will guarantee the preservation of the

submarine for 30 to 50 years. The interdepartmental commission which is a part of the Security Council of Russia has confirmed the proposed draft. Underwater sealing work will begin in the summer of next year. Otherwise, the specialists expect leaching of the products of plutonium corrosion, a massive discharge of radioactive elements, and pollution of the natural environment for 600-700 years by the end of 1994. Only domestic organizations are to be used for work. The St. Petersburg TsKB [Central Design Bureau] Rubin, the St. Petersburg Technology Institute, and a number of defense enterprises act as leading developers.

In the words of Tengiz Borisov, the main task of the committee is to conduct continuous ecological monitoring of Russian coastal waters. In the summer, the area of Novaya Zemlya where nuclear waste was actively dumped in the 1960's and 1970's was surveyed for the first time. The committee is also working vigorously on the use of the preservation technology to neutralize a tremendous amount of chemical ordnance in the Baltic Sea which was dumped by allied troops after World War II.

As the chairman says, the Committee for Underwater Projects which was created a year ago is called upon to play the role of a "groundskeeper" of the depths of the sea. Some 17,500 containers with radioactive waste were dumped in the northern seas of Russia, 6,000 containers in the Far East. Eight nuclear reactors and two nuclear submarines rest in the Gulf of Biscay and near Cuban shores. The committee has offered a unique, just developed technology for the purification of liquid nuclear waste for joint use with the Japanese and South Koreans. If this technology is implemented, it will be possible to ultimately abandon the dumping of poisonous waste into the water as early as the coming year.

Danilov-Danilyan Concerned About Russia's Garbage Disposal Methods

94WN0100A Moscow MOSKOVSKAYA PRAVDA in Russian 23 Nov 93 p 1

[Article by S. Demin under the rubric "Ecology": "Burning Gold"]

[Text] This is how V. Danilov-Danilyan, minister of environmental protection and natural resources of Russia, described the issue of garbage disposal in Russia and specifically in the Moscow region at a press conference devoted to ecological problems in our country held yesterday at the House of the Russian Press.

In the words of Viktor Ivanovich, in developed European countries household waste is sorted and either recycled or burned. In our country, everything is burned without distinction, producing smoke which does nothing to improve the ecological situation in the country. Millions of rubles go up in smoke. This happens because there are neither specialists in sorting waste nor special plants. On the whole, the ecological situation in Russia is critical, but for now nothing can be done about it: In a country with a sick economy, the environment will also suffer. Mr. Danilov-Danilyan stated that inspectors of the environmental

protection inspectorate are frequently unable to even assess fines against enterprises: They run to billions, and enterprises may go bankrupt, leaving hundreds of thousands of people out on the street. Meanwhile, Russia has only 16,000 ecology specialists.

Bashkortostan To Test Domestically Produced Water Purification Plant

94WN0091D Moscow MOSCOW NEWS in English No 47, 19 Nov 93 p 8

[Article by Dmitry Kossakovsky; first paragraph MOSCOW NEWS comment]

[Text] The first domestically-produced plant for the purification of drinking water from highly toxic admixtures will be tested in the capital of Bashkortostan.

Ecological disasters following the releases of highly toxic organic compounds in Bashkiria of 1990-92 have stimulated the development of a domestically-produced system for the protection of drinking water from dioxine and other super-ecotoxicants. For the development of a special technology and equipment more than ten Russian institutes have joined their efforts. Also participating in this work are scientists from the United States, Sweden and the Federal Republic of Germany. The project is financed by the Mayor's Office of Ufa and the Mac-Arthur Foundation of the United States. The project has no equal in world practice, since the country's chemical plants insured a unique "working area," having contaminated vast territories and water basins. The contents of dioxines done in the drinking water of Ufa during the peaks of the outbreaks exceeded the permissible level by more than ten times.

The technological cycle for the unit is being worked out by the VODGEO [expansion not given] Research Institute. As the head of the project Alexander Smirnov put it, the results obtained by the present time make it possible to hope that the problem will be solved with the use of Russian technologies and materials. The expenses for removing dioxines, according to VODGEO estimates, will make up 25-30% of the total water-purification expenses.

Technology Developed To Extract Lead From Batteries

94WN0091B Moscow MOSCOW NEWS in English No 47, 19 Nov 93 p 7

[Article by Roman Gerasimov and Dmitry Kossakovsky; first paragraph MOSCOW NEWS comment]

[Text] An ecologically pure technology of producing secondary metal has been developed at the Institute of Electro-Chemistry of the Russian Academy of Sciences.

After the disintegration of the USSR the commercially developed lead deposits for Russia's customers found themselves outside of the country's borders, whilst the price of lead from the CIS countries is quite often higher than it is on the world market. At the same time the demand for it can, to a considerable extent, be met by using the storage batteries which have exhausted their

service life. In the industrially advanced countries up to 95% of used batteries are processed, and 75% of requirements in lead are being met with secondary metal obtained in such a way. Its cost is approximately three times less than primary. In Russia less than 50% of used batteries are being collected, which is creating a serious ecological problem. The nearly 90,000 tons of lead scattered annually in the environment contaminate it more than the releases from burning ethyl petrol. The pyrometallurgical method of the treatment of old batteries, used in our country, contaminates the environment with sulphur dioxide and lead aerosols.

The Electro-Chemistry Institute of the Russian Academy of Sciences has worked out an electrochemical technology which not only has a number of ecological advantages (absence of harmful effluents into the atmosphere, minimum amount of solid waste, closed cycle of water-supply), but is also economically more profitable than pyrometallurgical technology.

It is particularly convenient for the treatment of a small number of storage batteries (about 3,000 a year), which makes it possible to site production not far from the places where used batteries are collected and so save on the storage facilities and transportation expenses.

IAEA Endorses Continued Operation of RBMK-Type Reactors

94WN0091A Moscow MOSCOW NEWS in English
No 47, 19 Nov 93 p 7

[Article by Gherman Lomanov; first paragraph MOSCOW NEWS comment]

[Text] The International Atomic Energy Agency-financed group of experts has found no reason for bringing the Chernobyl-type reactors to a halt at nuclear power stations in Russia and Lithuania.

The experts prepared their report on the results of the recent missions of ASSET (groups for appraising events at atomic power stations from the standpoint of their safety) which carefully studied the work of four of the five stations with the RBMK-type fast reactors: The Kursk, Leningrad, Smolensk (Russia) and Ignalina (Lithuania) stations. The experts' field of vision did not include the Chernobyl Atomic Power Station inasmuch as Ukraine planned to bring it to a final halt (in October the Ukrainian parliament decided nevertheless to keep the ChAPS alive).

The experts also took a look into the March incident at the Leningrad APS (destruction of the gating valve in the third unit). As a result, such valves at all the stations with RBMK reactors were replaced with the mechanisms of the latest design, and the methods for detecting defects were improved.

The IAEA [International Atomic Energy Agency] experts stated: the steam coefficient of reactivity (a parameter determining the reactor's inner safety not dependent on personnel) had been lowered tenfold since 1986. They spoke highly of the work of operators, saying that the culture on most safety was growing. An appraisal which is not only flattering but

even most unexpected (considering the destructive processes in industry and power engineering), yet its objectivity is beyond all doubt.

Their conclusion—there is no need to stop the RBMK reactors (given, of course, the timely implementation of ASSET's recommendations for ensuring the safety of each APS).

In parallel with the work of ASSET's missions revising primarily the reactors' safe operation, an effort is currently underway to implement the international project of the Commission of the European Communities whose participants investigate the dependability of the RBMK's design solutions. With this aim in view a consortium of Western countries was set up with the participation of Finland, France, Germany, Italy, Sweden and Britain (who were later joined by Canada and Spain). As many as nine joint subject groups were formed and have carried out active since the spring of 1993.

By the end of the year they must prepare a report containing an appraisal of the existing APS with RBMK reactors and recommendations for enhancing their safety. But already now John Tyror, chairman of the committee in charge of the project, has found it possible to say that "the experts have found nothing serious which would prevent people from sleeping quietly." This statement by one of Britain's leading nuclear scientists sounds all the more meaningfully since previously Mr Tyror believed that the RBMK reactors were not consistent with European safety standards. A more detailed acquaintance with these reactors made him change his mind, whereas the generally positive and sufficiently optimistic appraisal of the RBMK by two independent international groups of experts makes it possible to hope that the accident, provoked by the gross mistakes of the personnel of the Chernobyl Atomic Power Station, has not finally discredited the idea of channel reactors.

Trade Unions Form Association To Deal With Environmental Issues

94WN0100B Moscow RABOCHAYA TRIBUNA
in Russian 7 Dec 93 p 3

[Interview with V.I. Romanov, chairman of the All-Russian Association of Trade Union Organizations From Regions With Adverse Ecological Conditions (EKO-ASSPROF), by Viktor Ukolov; place and date not given: "Do Not Drink or Breathe, or Else You Will Die. EKO-ASSPROF Chairman Vasilii Romanov Maintains: 'The Ecological Crisis Has Spread to Virtually All of Russia'"]

[Text] There is no need to introduce Vasilii Romanov to our readers. Trade union activists know him as the former deputy chairman of the FITUR [Federation of Independent Trade Unions of Russia]. When a new team came to lead the Federation after the October events and the extraordinary Congress that followed, he focused on work in the All-Russian Association of Trade Union Organizations From Regions With Adverse Ecological Conditions (EKO-ASSPROF).

Ukolov: Are you waiting it out in a quiet haven? Vasilii Ivanovich, pardon me for this tactless question.

Romanov: I do not consider concern about the health of the working people to be something of a rear echelon. Traditionally, it has been above all for trade unions.

Of course, this is a very extensive field of activities. There is room for executive organs, entrepreneurs, and public organizations alike to apply themselves. We cannot procrastinate—the life expectancy of Russians is falling sharply, the birth rate is declining. Specialists project that if emergency measures are not taken, by the end of the century Russia will turn into a sick society with a low percentage of healthy people.

Ukolov: I know that for you this is not just scientific research and projections; you have had occasion to inhale smog yourself....

Romanov: Indeed, I lived and worked for almost 30 years in the Kuzbass, which is actually an ecological disaster zone. The population is under continuous pressure from the heavy, poisoned air. Kemerovo, Novokuznetsk, Prokopyevsk.... When the air is still there is nothing to inhale. It is dangerous to go outdoors, people faint. I remember that classes were canceled in schools. This is why I did not hesitate when comrades proposed that I head the ecological association of trade unions (EKOASSPROF).

Ukolov: Is this a major organization?

Romanov: It was formed relatively recently, in July, but 53 regional interunion associations (trade union councils of republics, krais, and oblasts) have already joined it. The number will increase.

Let us talk of broad issues. To this day Russia lacks a state ecological policy, and health issues are not considered a priority in the process of economic reforms in Russia.

At present, in the course of the preelection debate, I diligently search for things that diverse "friends of the people" contending for seats in the Duma are promising Russians as far as healthy living is concerned. I am surprised; they are silent as if they had a mouthful of water.

Ukolov: If this water is from foreign bottles this would be possible, but if it is our running water it is risky.

Romanov: This surfaced in one of the newspapers: ecological laws are an excessive economic burden on Russia, and it is hardly feasible for the new parliament to consider them. In short, it is cheaper to blow off the future of the Russian people. However, the issue is "either-or": either die or live.

Ukolov: Do you think that the association will tip the scales toward a favorable outcome?

Romanov: We have no intention of surrendering. We will work on specific measures to improve the ecological situation at enterprises and places of residence. This is the first point. Second, we should overcome the ecological illiteracy of the populace. We will try to devise a system of prompt information for the people concerning what they inhale and drink. We should get used to such messages as we did

to weather reports. We should know how to take self-defense measures as long as it is useless to attach hopes to the state. To facilitate the provision of preparations and drugs to victims is also a task of the EKOASSPROF.

An applied scientific conference which is scheduled to be held in Kemerovo in January-February of next year will serve as a prologue for the creation of regulations. At the conference we will ponder a mechanism necessary for the official recognition of ecological disaster zones and the requisite procedures for compensation for harm done to the health of the people and their property.

This is what is strange at present; why do they now charge us an arm and a leg for everything: The system of consumer services has driven up prices, and power generation.... Everyone says that he operates in a market economy. However, why should I pay the entire 100 percent of the price for dirty water which I am forced to drink?

In Russia more than 60 million people reside in an environment of high gas content and extreme air pollution. About 50 percent of the population of the country use water for drinking which does not meet hygiene requirements on various indicators. Why do we pay for that in full?

Here is an equally "naive" question: Why is someone deliberately trying to cut short my life, which my mother and God have given me? On what grounds?

Ukolov: Simmer down, Vasilii Ivanovich. Let us turn to the draft Constitution of Russia which is to be submitted to a referendum on 12 December. Article 42: "Everyone shall have the right to a favorable environment and authentic information about his condition, as well as compensation for damages inflicted on his health or property by violations of ecological law."

Romanov: For now this is a hollow declaration. The trade union ecological association is specifically undertaking to prepare regulatory acts in order to translate very good words into equally wise actions.

Since we have touched on the draft Constitution, I will note that great powers granted to the components of the Federation are built into it, including those to solve the most acute ecological problems. Alas, we do not have a single republic, kray, or oblast in which these problems are not acute to some degree. This means that regional trade union organs should work long and hard together with the local authorities in order to make the residence of their fellow citizens safe.

The Days of Defense Against Ecological Dangers, from 15 April to 5 June 1994, will become a major and memorable action which, I hope, will be useful for all citizens. The EKOASSPROF is among its organizers. The Day of Remembrance for those who died in radiation accidents and disasters on 26 April and the World Environmental Protection Day on 5 June will be the focal events.

Ukolov: Let us agree on this: This event requires a separate conversation, and we will postpone it for now. However,

here is my last and perhaps somewhat improper question: Vasily Ivanovich, you were forced out of leadership positions in the FITUR because, as I understand it, you are a proponent of forcible methods for conflict resolution, one of the originators of the ill-fated Collective Action Plan which incurred the wrath of the powers that be. As a result, they nearly "stamped out" the entire FITUR. Therefore, have you overcome your nature or not?

Romanov: I believed and still believe that collective actions of the working people are a regular means to protect their socioeconomic interests which, incidentally is provided for in the constitutions of all civilized states. It is primarily proper and effective when the government or entrepreneurial side violates the previously achieved agreements. However, this highly significant decision should, of course, be made by the primary organizations, their sectoral trade unions, and associations themselves.

Bad Water Threatens Volga Basin Dwellers' Health

PM0912144193 Moscow IZVESTIYA in Russian
8 Dec 93 First Edition p 2

[INTERFAX report: "Nearly Everyone in the Volga Area Is Forced To Drink Contaminated Water"]

[Text] Some 61 million people living in the Volga River basin in Russia are forced to use highly contaminated drinking water, which is making increased chlorination necessary, thus damaging the health of the population.

This was stated at a joint session of the Russian Ecology and Natural Resources Ministry collegium and republic State Sanitation and Epidemiology Inspectorate. According to the collegium's data, no territory in the Volga area has health and hygiene and microbiological standards for the quality of drinking water. The ecological situation has become most unsatisfactory in the Cherepovtsy, Nizhniy Novgorod, Samara, Saratov, Volgograd, and Astrakhan industrial centers, where there is a high level of pollution due to petroleum products, phenols, and other compounds.

Delegation Offers Japan Cooperation on Nuclear Waste

LD0912224493 Moscow ITAR-TASS in English
2122 GMT 9 Dec 93

[By ITAR-TASS correspondent Andrey Varlamov]

[Text] Tokyo December 10 TASS—Russia offered Japan cooperation in liquidating radioactive waste of the Pacific Fleet and in building a storage for fissile nuclear materials released as a result of disarmament. Documents to this effect were submitted on Thursday to the Japanese Government during two-day consultations in Tokyo. The Russian side was represented at the consultations by a delegation led by academician Nikolay Laverov, vice-president of the Russian Academy of Sciences.

When discussing possible disposal of liquid low-active waste produced by nuclear-powered submarines of the

Pacific Fleet, the Russian delegation, which included representatives of the Navy, suggested calculating how much it will cost to stop dumping these wastes into the world ocean and to build facilities for their complete recycling. Another proposal provides for the construction not far from the Siberian city of Tomsk of a storage for uranium and plutonium released in the process of dismantling nuclear warheads.

Commenting on the Russian projects in an interview with TASS, Nikolay Yegorov, a member of the delegation and Russian deputy minister for nuclear power engineering, stressed that in this manner the Russian side displayed an initiative to promote implementation of the agreements reached, specifically, during Russian President Boris Yeltsin's visit to Tokyo this October. Yegorov noted that Japan's participation in both projects would not cost it more than 6 mln dollars out of the 100 mln dollars of the earlier announced financial assistance to the former Soviet Union's nuclear disarmament. In any case, Moscow is ready to shoulder the lion's share of expenses.

The Japanese side, represented at the meeting by experts of the Foreign Ministry, scientific and technical department and the Ministry for Foreign Trade and Industry, showed a great interest not only in Russia's proposals, but in the very possibility of exchange of opinions between nuclear specialists. An official of the scientific and technical department gave a positive assessment to the consultations and stressed that Japan favoured this initiative and was ready to go ahead with it.

Bryansk Oblast Copes With Post-Chernobyl Problems

94WN0108B Moscow OSHCHAYA GAZETA
in Russian 10 Dec 93 p 15

[Article by Valeriy Gorbachev: "Seven Years With Risk of Long-Range Consequences"]

[Text] Bryansk Oblast-Moscow—According to data provided by scientists, more than 2 million people in Russia (including 550,000 children) who reside in territory whose soil has a cesium-137 contamination density greater than 1 curie/square kilometer were subject to the influence of radiation in 1992. Even in view of this, the Russian "Chernobylers" are in no hurry to abandon the contaminated zone. Cottages that have been constructed for them lie empty.

The day following the explosion in the Belarusian Chernobyl, a red cloud hung over the skies of Baturovka in Bryansk Oblast. A day later, many people experienced nosebleeds. Baturovka fell within the radioactive contamination zone, the intensity of which presupposed mandatory resettlement of people out of these territories...

To this day people in the zone have been trying to live the way they did prior to 1986, as if the Chernobyl events had not put an end to the previously established order of affairs. Farms continue to turn over meat, milk, potatoes, and other agricultural output to the state. Krasnogorskiy Rayon, for example, is expected to deliver 500 tonnes of meat and 520 tonnes of milk this year. Potatoes are sold at

the price of R18 per kilogram, which does not fully compensate for expenses. Vasily Khandoshko, chairman of Baturovka Sovkhoz, proposed that I act as intermediary between the sovkhoz and Moscow in selling potatoes at R50 per kilogram. However, I refused...

They do not like instigators in Baturovka. They believe all the problems stem from them. They are therefore very suspicious of someone new in the area. The words "moving" and "cows" are forbidden topics here. When cows are reluctantly discussed, it is with the challenge: "No matter what Chernobyl horrors you want to talk about, I will be lost without my livelihood."

Milk for human consumption in the zone is an extremely dangerous item. Immediately following the accident, a ban was placed on putting livestock out to pasture. Then they had the cattle compulsorily moved out of sight and slaughtered. Local residents reconciled themselves to the loss so long as "clean" products were being delivered to the sovkhoz. Soon, however, the deliveries of milk, cheese, and butter ceased. Baturovka residents then ignored the ban and again brought in livestock.

For the older people, it is an extremely bitter pill to abandon their native land, in which their ancestors lie and to which they themselves have become so attached. Some are unable to endure the ordeal of moving and pass away a year or two after arriving at a new location. Many return.

It is not only the old people who return. Five families returned to their sovkhoz from Zhukovskiy Rayon. Machine operators and vehicle drivers, they were never able to find work—only boiler operators and odd-jobs workers were needed in the new location. And even here the money was not good and the jobs called for "unskilled laborers." In addition, the new settlements in question do not yet have schools, kindergartens, or stores.

Three young families forced to leave Kyrgyzstan settled recently in Baturovka. For about six months, Olga Zavtonova's husband searched all over Russia for a place that could provide housing and an opportunity to begin working. The housing situation proved so difficult in the Russian interior that the Zavtonovs decided to resettle here with their children—where they were immediately provided a brick house. But Olga worries all the same: How dangerous is it to live in Baturovka?

Nor does Vladimir Ushakov properly know the degree of danger present. Born and raised in Baturovka, Ushakov was 17 years old when the accident occurred. He served his time in the Army, returned to the village, became a driver, and got married. A year and a half ago, a child was born to the family. In Vladimir's words, doctors are constantly checking the family for "accumulation of radionuclides" in their bodies. Figures are cited during every visit. But what exactly do these figures mean? Then again, the Ushakovs do not have any particular need to decipher them—they are better off just being quiet about things...

P.S. In Moscow I looked up Dmitriy Chuksin, deputy head of the Department for Environmental Monitoring and

Land Rehabilitation of the Russian Federation State Committee on Chernobyl, and asked him to comment on the situation in Bryansk Oblast. Chuksin initially proposed that the committee be paid a fee for information he provided (which, as I immediately guessed, would be directed towards implementation of the program for eliminating the aftereffects of the accident). But in my private conversation with him, Mr. Chuksin told me that a draft new concept for residing in the region had been drawn up by the committee. It was their position, he stated, that living on the lands subject to the influence of radiation (except for the most dangerous zones—the exclusion and resettlement zones), including Krasnogorskiy Rayon, where this correspondent was at the time, "entailed risk, but was possible."

Russian Academy of Sciences Professor Irina Plevina, a radiobiologist in charge of the laboratory for research in the long-range consequences of the influence of radiation of the Chemical Physics Institute, provided her commentary on this subject:

"My own point of view often diverges from the position of representatives of the State Committee on Chernobyl and that of the Bryansk Oblast Administration, as well as from the opinion of certain Russian scientists who declare the possibility of residing 'safely' in territories suffering the consequences of the accident at the Chernobyl Nuclear Power Plant."

"Human life in these regions is linked with constant exposure to radiation in small doses over the course of a long period of time. This situation is fraught with long-range effects (an example of which is the appearance of malignant tumors). The 'risk of emergence of long-range consequences' increases as the irradiation dosage increases. But there is also a risk associated with long-term exposure to small doses. In this regard, such consequences may take quite some time before becoming manifest—hence use of the word 'long-range'! For example, leukoses usually appear after a maximum period of eight to 10 years, tumors of all varieties—after 20-40 years."

"If we take the point of view that a 'risk of long-range consequences' exists in inhabited regions, even with respect to a small number of people, then it is simply criminal under such conditions to refer to safe living."

Lack of Funds Hinders Safe Disposal of Liquid Nuclear Waste

LD1712163293 Moscow INTERFAX in English
1536 GMT 17 Dec 93

[Text] Funds are needed immediately if Russia is to dispose of liquid nuclear waste (LNW) safely. Their dumping into the sea was halted in response to international protest against the disposal of a small amount in the Sea of Japan on October 17. The authorities said that they had no other choice at that time.

Experts in the Environment Protection Ministry of Russia say that in recent years the total amount of LNW in navy ships and repair yards has been stable at 18,000 to 20,000

cubic meters a year. However, as utilization of nuclear submarines continues in the coming years, that amount is expected to increase by 20 to 30 percent by the year 2000.

Russia has just one facility which meets international standards and is capable of neutralizing all kinds of LNW at a rate of 22.5 cubic meters per hour. It is installed in the Atomflot enterprise, Murmansk, and serves nuclear ice-breakers. To neutralize all the LNW of the Northern Fleet the enterprise would need nearly 2 Bn rubles in 1994.

The Northern and Pacific Fleets have one special-purpose tanker each which carries LNW neutralization units but their performance does not meet international standards. The upgrading of the units would cost nearly 3 Bn rubles.

Experts believe that if funds for these projects are made available soon, by the end of the first quarter of 1994 the LNW neutralization would be less of a problem and by the end of the next year there would be no need to dump LNW in the sea.

Environment Minister Meets Slovak Counterpart

*LD1712184693 Moscow ITAR-TASS in English
1403 GMT 17 Dec 93*

[By ITAR-TASS string correspondent Aleksandr Shuvalov]

[Text] Moscow December 17 TASS—Slovakian Minister for the Environment Jozef Zloch visited Moscow from December 14-17 at the invitation of Russian minister for the Environment and Natural Resources Viktor Danilov-Danilyan. The sides discussed problems of ecological cooperation.

They noted that there was much in common between the Russian and Slovakian nature-protecting methods. Both ministers believe that cooperation between the two countries should be primarily focused on the protection of the atmosphere from pollution, on environmental monitoring, and on the effort to discard, render harmless, and utilize household, industrial, and agricultural wastes, on the improvement of the environment in all the populated localities.

The sides are also plan to exchange information on new ecologically clean nature protection techniques, on the establishment of databanks containing information on various aspects of scientific, engineering and business activities in the sphere of ecology, on the elaboration of scientific and technological programmes, and on steps to promote their implementation.

Yeltsin Signs Edict on Natural Resources

*LD1712143793 Moscow ITAR-TASS in English
1320 GMT 17 Dec 93*

[By ITAR-TASS correspondent]

[Text] Moscow December 17 TASS—Russian President Boris Yeltsin has signed a decree "On Federal Natural Resources", the press service of the president of the Russian Federation reports.

The decree was issued to implement the Federal Treaty, to safeguard and rationally exploit the country's natural

resources of nationwide importance, to ensure the Russian Federation's stable development in conditions of a market economy. It took effect from the moment it was signed.

Navy Wants Permission To Dump Waste in Territorial Waters

*LD2112024293 Moscow ITAR-TASS World Service
in Russian 1746 GMT 20 Dec 93*

[By ITAR-TASS correspondent Roman Zadunayskiy]

[Text] Moscow, 20 Dec—The situation regarding the Pacific's Fleet's storage of liquid radioactive waste is catastrophic. Storage facilities are full to overflowing, and if the problem is not solved over the next few weeks, they can rupture and radioactive waste will be discharged into the ocean in the Far East. This was stated by Viktor Kutsenko, head of the chief directorate of ecological safety of the Russian Ministry of Environment Protection, who was attending today's roundtable meeting on the problems of the burial of nuclear waste held at the Peace to Oceans international committee.

Captain First Rank Yevgeniy Romanov, representing the Russian Navy and head of section at the Navy's chief technical directorate, who was present at the meeting, also expressed fears that if urgent measures are not taken, an ecological disaster is possible in the Far East. He added that the merchant fleet vessel TNT-27 was full of radioactive waste. The TNT-5 vessel also holds 400 cubic meters of radioactive waste. These vessels are old and unfit to carry a large quantity of liquid radioactive waste, and no one can guarantee that they will not sink at the quay, said the Navy's representative.

Measures to utilize radioactive waste, under consideration at the Environment Protection Ministry, with the participation of Navy experts, are thought to take a year to implement, while these vessels are in no position to wait a year, said Romanov. He noted that in view of the extreme situation, the Navy intends to ask the Russian Government for permission to carry out a controlled discharge of liquid radioactive waste in Russia's territorial waters in the Far East.

In October 1993 a merchant vessel carried out a partial discharge of low toxic waste in the Pacific Ocean and this made Japan very indignant. Kutsenko said that this waste posed no danger. Its radioactivity was so low that it did not have to be classified as radioactive at all. The scientist also noted that the Pacific Fleet would need 10 billion rubles or several hundred million dollars to utilize liquid radioactive waste. Japan's promise to assist Russia in setting up liquid radioactive waste reprocessing facilities so far remains only a promise. At the same time, the Japanese are themselves discharging similar waste in the Pacific.

According to an international convention, signed in 1972, the discharge of radioactive waste is banned in international waters throughout the world, while any state is free to do as it sees fit within its own territorial waters.

Official Reports on Handling of Liquid Radioactive Waste*LD2012164093 Moscow ITAR-TASS in English
1404 GMT 20 Dec 93*

[By ITAR-TASS correspondent Vyacheslav Bantin]

[Text] Tokyo December 20 TASS—Russia will have to dump liquid radioactive waste into the sea for at least the next two years, according to Valeriy Danilyan, head of the Pacific Fleet Chemical Defense Service.

Danilyan is in Tokyo to participate in the two-day Russian-Japanese consultations on the prevention of radioactive waste dumping into the sea. In an interview with ITAR-TASS on Monday, he said that even if western countries launch an immediate aid to Russia to build special facilities to utilize liquid radioactive waste, it will take two years at the minimum to complete the work. "During this period we will have to dump waste into the sea if no alternative solution is found," he said.

"Two specialised tankers the Pacific Fleet has to store radioactive waste, which, by the way, are almost beyond repairs, are completely full. If the waste is not vented, then there will be no place to store new low-toxic waste to be released from dismantled nuclear submarines," Danilyan said.

At present 17 nuclear submarines have already been dismantled and 50 more are awaiting their turn, he added. Danilyan also pointed out that the radioactive discharge into the Sea of Japan in October has not damaged the environment. He noted, while stressing that this is his personal point of view, that "the discharge of liquid low-toxic waste does not pose any threat."

He also believes that the best place to dump radioactive waste is the open waters of the Pacific Ocean which are far away from the territorial waters of all states of the region. "But our tankers cannot sail far away from the coast because they were built more than 30 years ago and have long become obsolete," Danilyan concluded.

Komsomolets Nuclear Sub To be Sealed Summer 1994*LD2212231293 Moscow INTERFAX in English
1959 GMT 22 Dec 93*

[Text] Corrosion is going at a high rate in the Komsomolets nuclear submarine that sank in the Norwegian Sea, Tengiz Borisov, chairman of the Russian government's Underwater Works Commission, said at a news conference in Moscow Wednesday.

The submarine sank on April 7, 1989. It carried two torpedoes with nuclear warheads and four conventional torpedoes. Komsomolets was the third Soviet submarine that sank as a result of a technical failure.

Borisov said that raising the submarine was out of the question because its titanium hull, torpedo compartment hatch rods and bodies of the torpedoes, notably carrying nuclear warheads, were damaged.

Even though the nuclear reactor of the submarine was damaged, it was said to be safe with the radiation leak level being about 10 Ci per liter but the possible disintegration of torpedo nuclear warheads might result in leakage of plutonium and environmental damage.

Borisov said that plans were about to be finalized to seal the torpedo compartment of Komsomolets. The works, he said, will be carried out next summer at a cost of one to two billion rubles. The Russian government was said to have made a decision to appropriate the funds. Once the sealing is done, Borisov said, a program of extracting nuclear warheads from the submarine will have to be devised.

Japan Offers Aid To Prevent Marine Nuclear Waste Discharges*LD2212211393 Moscow ITAR-TASS World Service
in Russian 1358 GMT 22 Dec 93*

[By ITAR-TASS correspondent Vyacheslav Bantin]

[Text] Tokyo, 22 Dec— Overall, the Russian delegation gives a positive assessment of the results of the two-day Russian-Japanese consultations on the problem of preventing Russian discharges of radioactive waste into the sea in the Far East, that ended in Tokyo today. This was stated in an interview to the ITAR-TASS correspondent by Mikhail Kokeyev, head of the Russian delegation, and deputy head of the Directorate of International Scientific and Technical Cooperation of the Russian Federation Foreign Ministry.

He said that at the consultations agreement had been reached in principle that Japan will provide emergency assistance to take measures aimed at averting the need for the Pacific Fleet to carry out new marine discharges of low-level radioactive waste. For this purpose, it is planned, in particular, to provide Russia with a special tanker to store waste. The two tankers that the Pacific Fleet has at its disposal for this purpose are already full. "Some other emergency measures are also possible that Japan intends to take to render us assistance," Mikhail Kokeyev noted. He let it be understood that it was a matter of really emergency measures which could be carried out within "the next few days or weeks." The head of the Russian delegation stressed, that apart from emergency measures, Tokyo will also give Russia assistance in implementing long-term programs intended to avert the discharge by the Russian Navy of low-level radioactive liquid wastes into the waters of the world's oceans.

Mikhail Kokeyev noted that the reaction displayed by Tokyo to the discharge by Russia of low-level waste into the Sea of Japan in mid-October had been constructive. "Japan did not limit itself to expressing concern about this—Tokyo immediately stated that it was ready to give assistance to Moscow in resolving this complicated problem," the high-ranking official of the Russian Foreign Ministry stated.

Chelyabinsk-65 Radioactive Waste Is 'Very Complex Problem'

PM0501095794 Moscow Ostankino Television First Channel Network in Russian 1800 GMT 25 Dec 93

[From the "Novosti" newscast: Video report from Chelyabinsk-65 by Sergey Sergeyev and Viktor Sosunov, identified by caption]

[Text] [Sergeyev over video of Mayak Chemical Combine exterior, interior] Shortly after the war, weapons-grade plutonium for the first Soviet atom bomb was obtained here at the Mayak Chemical Combine in the secret city of Chelyabinsk-65. Over the past 40-plus years more than 1,000,000 curies of radio-nuclides have accumulated here on the industrial site of one of Russia's major defense complexes in water reservoirs and special technological storage facilities. They present a serious threat not just to the Urals region but the whole planet.

[Academician N.P. Laverov, vice president of the Russian Academy of Sciences, identified by caption] This is a very complex problem. There has been nothing like this in the history of mankind. There has never been such an accumulation of radioactive waste. Therefore any step which is taken now demands careful scientific substantiation.

[Sergeyev] The Russian Government has adopted a program for the rehabilitation of the contaminated areas in the southern Urals. Scientists have been assigned an important role in its implementation. A session of the scientific and technical council has been held at Chelyabinsk-65, where specialists discussed the results of the steps taken in the year that is ending and elaborated tactics for combatting the dangerous radio-nuclides for the coming year. [video shows exterior, interior of Mayak combine facilities, conference]

Foreign Aid Needed To Prevent Dumping of Radioactive Waste

LD2712150993 Moscow ITAR-TASS in English 1436 GMT 27 Dec 93

[By ITAR-TASS correspondent Veronika Romanenkova]

[Text] Moscow December 27 TASS—The dumping of radioactive wastes into the Sea of Japan could be avoided if Russia "got very urgent aid from its partners," in particular from Japan, Russian Minister for the Protection of the Environment and Natural Resources Viktor Danilov-Danilyan told ITAR-TASS today.

The minister mentioned, as part of this aid, a mobile installation for processing liquid radioactive wastes. Huge quantities of liquid wastes have accumulated on tankers and an accident may occur on one of them at any time. Russia has no capacities in the Far East to process liquid wastes. "A submarine cannot be dumped into a garbage bin like a child's toy," Danilov-Danilyan said. Liquid wastes will continue to accumulate for another five years even if Russia decided to liquidate its Navy.

"At the present time, Russian experts have drawn up a plan and timetable for building liquid radioactive wastes

processing installations. It will be discussed by the government, shortly," the minister stated. The fulfilment of this programme requires not only much money—10 billion roubles, but also time (about two years). Therefore, "Japan will either have to agree to a regular disposal of wastes or provide Russia with an installation to process them," Danilov-Danilyan stressed.

BELARUS

Ecology Official Reviews Republic's Environmental Problems

934WN0080A Minsk ZVYAZDA in Belarusian 27 Oct 93 pp 1-2

[Interview with Anatol Darafeyew, chairman of the Belarus Republic State Committee on Ecology, by Valery Charnyawski: "Today No One Has the Right To Profit at the Expense of Others and Poison the Environment Expense." Chairman of the Belarus Republic State Committee on Ecology States His Views on Environmental Problems"; date and place not given]

[Text] We are not living well today, and we are treating the environment even worse. We note, moreover, that almost everybody sincerely blames everybody else for the crisis—while presuming, of course, to be the forests' and rivers' best friend and protector.

One suspects, however, that the long suffering environment might wish to submit some bills to many decent citizens. In this regard, we have a question for the republic's chief ecologist:

Charnyawski: Anatol Maksimavich, excuse my bluntness, but in matters of ecology we are barbarians and ignoramuses. You know more examples than I. Here is one: last year in Pukhavitski Rayon, during a hot dry spell, some blackened firemen were putting out a fire in a peat bog, while literally a kilometer away from there some healthy youngsters were arrogantly "having some fun" with a routine bonfire. Common logic protests against such barbarism; admonishment is not enough, punishment is needed!

Darafeyew: I don't need to argue something that is so obvious; in past years not enough was done to protect the environment and create a healthy habitat for human beings. I will emphasize that conditions today are even worse and, in many cases, simply critical.

People's treatment of the environment? Your Pukhavitski example is just one small typical event. Almost 99 percent of fires, including forest fires, are due to individuals who destroy the environment and yet consider themselves decent citizens. Recent events all over the CIS have shown the barbaric depths people can sink to in relations with one another, so why not take out their wrath on the environment, which cannot answer back?!

Politics, the ideology of confrontation, the ruined economy, and skyrocketing prices are also factors. Food is such a problem that poachers of all stripes have launched,

so to speak, a "massive assault" on the forests, rivers, and lakes. And if state and civic organizations responsible for the protection of wildlife and fish resources don't take appropriate measures, in two or three years we won't have any forests or wildlife, and the only rabbit we'll see is on banknotes....

Charnyawski: And then the very existence of *homo sapiens* will be in question....

Darafeyew: I say that in order to prevent this frightful occurrence we need to exert massive influence on the people's consciousness and enhance human reason—naturally, along with new laws and state measures designed to impose more liability for damaging the environment.

By the way, for the most active segment of society new environmental laws have done practically everything needed to make them feel like they really are the masters in this matter. For the first time in our history, ordinary citizens and individuals have the right to demand and receive detailed information from state organizations and officials. They have the right to propose bans on the construction of ecologically hazardous facilities, and to institute suit in court to recover damages done to their health or property as a result of violations of environmental laws.

Charnyawski: But so far, what you call the "active segment" is decidedly in the minority. I am not a pessimist, but I regret to say that our "ecological barbarians," whose name is legion, couldn't care less about these new rights of theirs. All they care about is the "right" to plunder nature and damage it. That's why enterprise directors (who are all "men of the people") largely behave that way, and their ability to "conquer" nature has grown a hundredfold. Let's recall, incidentally, the relatively recent amounts of fines levied, which are ridiculous: 10 rubles for an individual, 100 rubles for an executive. And how are we to "pressure" the numerous violators now, if nobody fears God, the Devil, or the law?

Darafeyew: Never mind; everybody looks after his own pocket. Fines today are not what they were once, neither is the principle of exacting them. In connection with the passing of the Law "On Protection of the Environment," the question of economic regulation of the exploitation of natural resources and environmental protection has taken a brand new turn—the economic mechanism has come into play. A harsher system of fines, court actions, and penalties for dumping harmful wastes in the environment has been created, applicable both to enterprises and to individuals.

Penalties now are more than a slap on the wrist. The starting point is the minimum salary, followed by higher rates. If our agencies or, for example, the foresters of the Ministry of Forestry, gets their hands on somebody, it is going to go very hard on them.

What's sad is that we have long had a working example right next door in Europe, and other places besides. In our country, as you know, we spent decades indulging in ideological self-glorification, saying that the capitalists

were rapaciously plundering the environment; we never wrote that they were protecting it.

To be sure, we also have started to fight the despoilers of nature, but only since the "new era," I'd say. I'm referring to a case in the late spring of 1990 in which, due to the criminal negligence of an operator in the Navapolatski Palimir Association, 90 tonnes of acetone cyanohydrin—a powerful poison—were dumped into the Western Dvina. The chief engineer was fired, while the operator wound up in court. So that one way or another we do have some experience "putting scoundrels in their place."

Charnyawski: Anatol Maksimavich, I notice you have mentioned the new "Law on Environmental Protection" several times. For good reason, I think. I propose, therefore, having commented on the deplorable state of society today and the fact that under such conditions environmental protection cannot be much better, you give some thought to what that protection ought to be in fact and how everything new is to be instilled in human consciousness and actual practice. There is plenty of doubt, and all of it real.

One article in the Law states that enterprises are to provide your committee with information about accidents, emissions, and other negative phenomena—and all "free of charge!" As if I would work against myself if I were the director! If I did that, where would I wind up in a day or two?!

Darafeyew: A businessman's personal ambitions are one thing, the interests of the state are quite another. What is at issue here is the overall monitoring of the environment. The republic is creating an ecology monitoring system which will be implemented by the State Committee on Ecology and other agencies empowered to do so. Like it or not, anyone involved in the production process is obliged by law to submit detailed information in order to create a general ecology information bank.

Are you saying people will cheat? That's quite possible. In addition to departmental control our own control will be on hand in the enterprises; organs of the State Committee on Ecology keep track of production conditions using their own instruments, and discrepancies show up quite often. Let me remind would-be conspirators that they will be liable—perhaps even criminally liable—for submitting false information or failing to submit information.

You have said that the departmental control service often takes violators under its wing to protect them from liability. We know that, and that's why our relations with them are critical. Because our State Committee is now a supra-departmental body, we have the right to check up on everybody, on any ministry or department. If we find any cheating, it will be punished. Let everyone keep in mind that users of natural resources themselves bear responsibility for improper use of resources and treatment of the environment. This is only civilized and fair; the principle is stipulated by the laws of all developed countries.

The trouble is that we are in the clutches of the "wild" market and the economic crisis. In such conditions, I

agree, implementing the new legislation is going to be painful to production collectives.

Charnyawski: Let me get back to the mentality of business executives, because some of them are really in a fix. Just how, if you please, can a man tell the world that everything in his plant is leaking and smoking, the plumbing is shot, yet production has been met? What if the enterprise has to be closed as a polluter? What then, thousands of people on the sidewalk out of work?

On the other hand, there are lots of monopoly plants whose collectives are coddled too much. All the profits and considerable state subsidies are plowed into wages, and nobody thinks about the ecology or perfecting the technology. Overall, there is a slide into truly savage capitalism and rapacious exploitation of resources.

Darafeyew: There's real food for thought. There are many enterprises where salaries are high and they are spending hard currency for—excuse the expression—glad rags and Toyotas in the West, but as for investing to improve the ecological situation, no way. The new law proposes a new approach: make them pay big for improper use of resources. Unhappy with the big payments? Then fix your technology. That's it.

Remember that under the command economy, enormous investments were made in new technologies, but hardly anybody thought about technological progress, and ecological spending was nowhere. The economic policy of the Law "On Protection of the Environment" will definitely change this mentality. No one will be allowed anymore to profit at the expense of others and poison the environment while not investing a ruble to renovate it.

Consider this fact, which has not had much play here in Belarus. At the conference on environmental problems and development, which was held in Brazil under the auspices of the UN, the whole world proclaimed the priority of the ecology. We do, after all, live in a civilized world. But if we don't civilize ourselves on the plane of ecology, we will remain isolated "savages"—and it will be reflected both in our standard of living and in relations toward us.

When it comes to our aging industries, how can we shut them all down? There's just one way—by using economic levers and ecology laws, to pressure their collectives so that they will at least start to gradually change their technologies. Consider the West: do you think they've closed all the heating and power facilities that run on coal? They could have, because the cost of smoke scrubbing technologies comes to about 70 percent of the cost of the enterprises. What they did was redesign them the way they should be.

Charnyawski: With a bit of fantasy we might imagine that in time we might make industrial and other enterprises act "polite." But what about having the military pay for the damage done to the environment and human health? Anybody who knows those unapproachable and unassailable gods the generals will probably never believe it. In Hungary, Poland, and the Czech Republic, claims are literally pouring in against former Soviet military installations for environmental damages. But in our case.... If

anybody is going to pay a fine, it will come from the budget, which means from the taxpayer's pockets. Isn't that right?

Darafeyew: You're mistaken there. Times are different now, the old taboos are gone that used to keep people outside the gates of the military. As far back as two years ago, there were cases in which military units were severely punished for damages to the environment and ecological accidents.

We now have operating a special group to service military facilities and grant them ecological certification. Now, military commanders are ranked the same as civilian executives—the same approach applies to all: if you do damage you can just pay the penalty. You refuse? There are environmental and military procuracies to take care of that.

To be sure, they do keep a "cut" for themselves, for their military cost—and it all comes from the state budget. Now, however, commanders also bear individual responsibility for ecological violations. In the new amended Administrative Code (as amendments to the law), all this will be stipulated legislatively. Relations between the State Committee and the Defense Ministry are generally good, and whenever some commander violates ecological regulations—maliciously—we can complain about him to the ministry, and the next time you look he'll have one less star on his epaulet.

Charnyawski: Once everything is on a civilized footing, in the future, society will be able to boast that the "military impact" on the ecology has been reduced to a minimum. But who will protect us from depredations against the environment by the local Soviets which have been given such expanded powers by this legislation?

I believe that many local leaders are ecologically ignorant. They might, for example, put up a hazardous asphalt plant in a summer residential area or commit some other unpardonable stupidity for hard currency. Do you know, Anatol Maksimavich, where rayon bosses sometimes put monies from the ecology tax and non-budget environmental funds?

Darafeyew: Now I agree with you there. Officials of rayons where there are big industrial polluters will do anything to see to it that the latters' fees for the use of resources go into their own coffers and stay there. What the other rayons get is the pollution plume. In such cases, no funds remain to form ecology programs in the oblasts and the republic.

But such rayon bosses, even when they do get the money, are not overly concerned with creating any "ecological paradise" in their area. Their aspirations are much more primitive—first, of course, to make a lot of money along with their apparatus; next, to acquire various prestigious "toys." In other words, they act on the principle "After us the deluge; who cares about the ecology?"

To a certain extent, of course, the local Soviets have to be independent, but they are also supposed to comply with general laws. The alternative is legal nihilism and anything-goes, with all the consequences. The Supreme Soviet

should guarantee compliance, along with our State Committee within the limits stimulated by the Law.

I say that because there is a dangerous tendency to bring hazardous and polluting technologies into our country from the West. Consider this: someone has even proposed bringing contaminated soil into Belarus for processing, for which they would pay us in hard currency. As if we didn't have enough contaminated land after Chernobyl!

Again, one German firm proposed that Belarus buy (!) briquettes made from the sludge of treatment plants for use as... fertilizer. They don't rate us very highly in the West if they're trying to foist things off on us that even poor Africans would refuse. But we have to remember that we have plenty of local-yokel anti-ecologists who would make a deal like that for dollars or marks. Naturally, agencies of the State Committee are standing guard over the state's interests, but how can you keep track of every wheeler-dealer in the market? Remember, then, that whenever such a scheme is uncovered, its perpetrators will be severely punished.

Charnyawski: And so, Anatol Maksimavich, we come to where we started from: We have to have penalties, especially in such a neglected sector as the ecology. It is clear that our society is not yet prepared, either spiritually or mentally, to pass the needed ecological legislation. Will we ever overcome this block in the general consciousness?

Darafeyew: I'm not inclined to be a rosy optimist either by position or experience. And I won't predict that we are soon going to have English-style gardens and lawns everywhere and that the air will become crystal clear. Our optimism must be pointed toward the realization that through concerted efforts we can survive and not slide into ecological catastrophe. That is our chief problem of survival as a nation. All it takes is for each one of us, to some extent, to be the patriotic master of our land and a wise human being.

LITHUANIA

Pentagon Experts Examine Environment at Airports

WS2112130293 Tallinn BNS in English 1750 GMT
20 Dec 93

[Text] Vilnius, Dec 20, BNS—The second group of experts from the U.S. Department of Defense examined the level of environment pollution on the territory of Lithuanian military airports.

The former Soviet airfield in Zokniai, not far from the town of Siauliai, is less polluted than supposed earlier, experts said. They suggested to get rid of the waste in the upper layer of polluted soil and to start serious cleaning work when soil examination results are known.

The Russians took out several cubic meters of radioactive soil before the airport was handed over to Lithuania.

Lithuanian authorities intend to transform the former Soviet base into a free economic zone.

MOLDOVA

Environment Minister Advocates Integration

94P20184A Bucharest AZI in Romanian 24 Nov 93 p 5

[Interview with Dr. Ion Dediú, minister of the environment of the Republic of Moldova, by Mihai Diac; place and date not given: "The Russians Exploited Our Chernozem Soil"]

[Text] *On the occasion of the third national colloquy, organized by the Romanian Society for the Protection of the Atmosphere (SOROPA), Professor Ion Dediú, the minister of the environment of the Republic of Moldova, was kind enough to grant us a short interview.*

Diac: How do you evaluate this symposium?

Dediú: In contrast to other ecological associations and movements, SOROPA is composed of specialists and technicians who are not motivated by profit. Currently, many see the problems of the environment as an opening for business. I would like to mention the professionalism of these nongovernmental movements, whose activities could be greatly assisted by the Ministries of the Environment and of Public Works and Land Improvement. If the ministers had been smarter and had exploited—in a positive manner—this initiative, which is benevolent and perhaps more sincere and honest than many others, even some in academic circles, I believe that the entire society would profit, not only the respective ministries. We, from the Republic of Moldova, are getting ready to pursue precisely this approach of the movements and ecological associations, which are geared toward the professionals. We have finally arrived at the stage of direct action, of uniting the activities of the ecological movements with those of the public organizations. I believe that the ministers do not have to direct these organizations, but can collaborate with them, and this would be mutually advantageous. Activity of this kind was a pleasant surprise for us; we discussed concrete questions, not demagogical ones. This is the way we need to have discussions, at the level of a board of directors or ministerial collegium. Romania is one of the first countries in Europe that has entered into the phase of concrete activities. It is a pity that other organizations, both here and in Moldova, have remained until now in a phase of strictly theoretical discussion.

Diac: In this respect, how do you see the collaboration between the governments of the Republic of Moldova and the Republic of Romania?

Dediú: I see it as an absolute and indisputable necessity. Since we announced a gradual strategy of economic, spiritual, and cultural integration two years ago, we must bring it about through concrete activities, starting with the juridical level and the harmonization of legislation, as, for example, in the domain of protection of the environment and the utilization of natural resources in the framework of some programs. We must not merely say from a podium that we want unity and that we want integration, because unity does not come from podiums or through words. We share this sacred work of integrating in a number of stages, and I believe that we should pass from the phase of commercial promises and arrive at concrete deeds concerning economic, cultural, and spiritual

integration. I assure you that we will do that regardless of whether or not some people want it.... I believe that "H-hour" will arrive. There are some historical steps that cannot be stopped.

Diac: What is the situation in the Republic of Moldova from the environmental point of view?

Dediu: Compared to the other countries of the former Soviet Union, we have inherited the most degraded environment, with the possible exception of Tajikistan. And, overnight, we find ourselves "returning to Europe"—I do not care for that expression. And we have the most degraded soil in Europe and the most polluted waters. Why? Because the former Soviet Union knew very well the significance of the Bessarabian chernozem, so they exploited it barbarously. At the beginning of the 1970's, when it was recognized that the "supply was running out," we began using fertilizers and pesticides.... And since the quality of the environment is tied to the quality of life, I can tell you that for these reasons, the average life expectancy in Bessarabia is 68, while the world's average is 72. The birth rate is the lowest of the past 50 years; the rate of occurrence of diseases directly influenced by the quality of the environment, such as cancer, gastrointestinal ulcers, cirrhosis, even cardiovascular problems, is twice as high as in other countries. And this when we have one of the oldest ecological cultures, a culture as refined as possible. Certainly, the communist, totalitarian regime bears the principal guilt, but where were we, where was our civic and national resistance?

UKRAINE

Government Adopts Resolution on Environmental Protection

WS0501142894 Kiev Ukrayinske Radio First Program Network in Ukrainian 1100 GMT 5 Jan 93

[Text] The Cabinet of Ministers of Ukraine has approved a resolution on procedures for conducting state registration in the field of atmospheric air protection. The state's executive authorities, enterprises, departments, and organizations, regardless of their ownership status, are obliged to comply with the resolution. The document emphasizes that the main goals of state registration in the field of atmospheric air protection are collecting data on facilities that cause or may contribute to atmospheric pollution, making assessments on the volume of harmful substances emitted into the atmosphere, and evaluating the influence of different physical and biological factors on air pollution.

Environment Minister on Ecological Aspects of National Security

94WN0092A Kiev NARODNA ARMIYA in Ukrainian 17 Nov 93 pp 1-2

[Interview with Yuriy Kostenko, minister of environmental protection of Ukraine, people's deputy of Ukraine, by an unidentified correspondent of NARODNA ARMIYA; place and date not given: "National Security. The Ecological Aspect"]

[Text] Yuriy Kostenko, minister of environmental protection of Ukraine, answers questions put by a NARODNA ARMIYA correspondent.

We will introduce our interlocutor.

He was born in 1951 in the Vinnitsa area. He graduated from the Zaporozhye Institute of Machine Building, worked at the imeni E.O. Paton Institute of Electrical Welding, and also completed graduate study there. He defended his Candidate of Sciences dissertation in the area of plasma technologies. Kostenko has more than 30 certificates of authorship and scientific publications.

He has been people's deputy of Ukraine since 1990. Kostenko has been elected deputy chairman of the parliamentary commission for issues of ecology and the rational use of natural resources.

Kostenko has been the minister of environmental protection of Ukraine since October 1992. He is a member of the National Security Council of Ukraine.

'The Scope of the Ecological Threat May Be Greater Than That of Any Aggression....'

NARODNA ARMIYA: Yuriy Ivanovych, recently the Supreme Council of Ukraine discussed a package of the national security issues of our young state. To your mind, how significant has the ecological aspect of the system of national security guarantees become?

Kostenko: The economic development of society has reached such heights toward the end of the 20th century that the threat of losing a favorable environment for the residence of people has become a reality. Our own bitter experience can be a case in point. The degree of unfavorable influence on the natural environment in many regions of Ukraine has now surpassed the consequences of the most devastating military aggression.

At present, nobody can say with certainty whether at some point children will be able to take walks in the city of Pripyat, whether it will be possible to drink water from the Dnieper without worrying, to swim safely at the sunny beaches of Mariupol, Odessa, and Yalta, or eat mushrooms from the forests in the area of Lugansk without risking one's life.

Under existing conditions, the ecological aspect of the system of national security of our state should be virtually the main one. However, we should state that in Ukraine, all levels of society lack the understanding that ecological threats in terms of their scope and the extent of unfavorable influences may surpass the consequences of any aggression.

'A Perpetual-Motion Machine for Processing Natural Resources Into Waste'

NARODNA ARMIYA: What caused, to the greatest degree, and continues to cause the dangerous condition of the environment in Ukraine?

Kostenko: Within the system of national security of the state, ecological threats are due to both domestic and

external reasons. That is to say that they are regional or global in nature. Our conviction is that, all the weight of the external aspects of ecological security notwithstanding, the critical condition of the natural environment that has emerged in Ukraine is due mostly to domestic reasons.

The nonecological development of industry, the power sector, and transportation; erroneous land-use practices; large-scale land reclamation efforts; infective activities aimed at preserving natural landscapes and their components—forests, lakes, rivers, steppes, and so on—are among the main reasons.

Ukraine's industry is one of the most dangerous in the world from the ecological point of view. Think about this: In the late 1980's, two times more iron ore than in the United States was produced in Ukraine, and only somewhat less coal than in Great Britain, France, and the FRG combined. As much steel was smelted annually as in the FRG and France combined. Ukraine's industry manufactured 7 million tonnes of pipes, which exceeded the combined output of Great Britain, Italy, and France.

What did we get in return? Did our standard of living rise to the level of the countries mentioned? Has a single social problem been solved in the Donbass or the Dnieper area? We may say "no" with confidence. Instead, we have had a rapid depletion of natural resources, man-made mountains of rock, poisoned air, and dead rivers.

A similar situation has developed in power generation. The proportion of the discharge of harmful compounds into the atmosphere of Ukraine by power generation comes to 30 percent of the total discharge. Coal dressing produces 35 million tonnes of barren rock annually. The reservoirs of hydropower stations occupy almost 800,000 hectares of fertile land; approximately the same area is underflooded.

As far as nuclear energy is concerned, the great probability of accidents with grave consequences forces us to classify nuclear power stations as the greatest ecological threat. The Chernobyl catastrophe alone has exhausted, for hundreds of years to come, the ecological reserve of all accidents of technological origin in Ukraine. Besides, the further operation of nuclear-energy facilities will be unavoidably accompanied by the accumulation of a large amount of radioactive waste. They do not just pollute the environment, but also pose the threat of irreversible changes both to the population of Ukraine and to all living organisms.

In addition to dangerous waste, the Ukrainian economy is one of the largest consumers of natural resources in the world. Land, minerals, water, air, and energy resources are devoured by enterprises in ever greater amounts. It is characteristic that, for example, we continuously have a shortage of electricity—even now that the overall level of production has declined by 30-40 percent—although our power generation per capita is at the level of the developed countries of Europe. Yet this is not surprising if we take into account the fact that the energy intensiveness of our production exceeds that of similar indicators in countries

such as the United States, Germany, or Great Britain by factors ranging from six to eight.

Thus, the national economy of Ukraine even now functions mostly in keeping with the principle, "Production for production's sake." This is why instead of an economy that would primarily meet the needs of the people, we have something of a perpetual-motion machine for processing natural resources into waste. Without breaking this vicious cycle, a solution to the ecological problems of Ukraine, and consequently guarantees of its national security, are out of the question.

NARODNA ARMIYA: What is the ecological status of the agro-industrial complex?

Kostenko: Not the best. The share of plowed land in the territory of Ukraine has reached 57 percent (in the United States, it is 17 percent). One-third of these areas have been depleted and are subjected to intensive erosion. If we do not reduce the percentage of plowed land by way of both environmental protection measures and changes in the tax system, Ukraine may be left without its famous Chernozem soils.

Unjustified and incompetent land reclamation has caused a great deal of trouble! I will give you only a few numbers, which are based on data from scientific establishments. During the years of land reclamation, the area of drained land in Polesye has doubled, and the danger of deflation and soil erosion has increased by a factor of 27. In the southern regions, changes in irrigation technology are needed on 18 percent of the irrigated land. As little as just over one-third of the irrigated land remains in good condition there.

The intake of water to meet economic needs has been growing continuously. The runoff of many rivers is taken in full in years with low, and even average, water availability. The inclusion of small rivers into land reclamation systems and the thoughtless draining of marshlands have resulted in disruptions of their hydrological regimen; the quality of natural water and its self-purification capacity have deteriorated.

The current condition of our forests is critical. They occupy one-half of the area that they do in adjacent states—Poland, Slovakia, and Belarus. Only 6 percent of our forests are mature, whereas 15-20 percent should be.

'We Will Not Accomplish Anything in the Absence of a Strong Policy of Environmental Protection'

NARODNA ARMIYA: Yuriy Ivanovych, what major shortcomings do you see in the organization of efforts to protect the environment in our country? What should be done specifically in the context of guaranteeing our national security?

Kostenko: First of all, it should be grasped at all levels of state government that improvements in the natural environment are impossible in the absence of a clear-cut program, continuous attention and, certainly, considerable material and financial outlays.

What do we have at present? Our own state budget is the most instructive in this regard. It allocates only 0.2 percent of the gross national product (GNP) for all environmental protection measures in 1993. For comparison, Scandinavian countries spend close to 1 percent of their GNP just to help other states. The fact that economic losses reach one-tenth of the entire gross national product in Ukraine as a result of deterioration in the quality of the environment testifies to our short-sightedness.

Moreover, the Ministry of Natural Resources, which in keeping with legislation in effect is supposed to ensure compliance with the norms of ecological safety in Ukraine, controls as little as one-tenth of these funds, of these purely symbolic budget outlays for the protection of natural resources, or 0.02 percent of the GNP. This does not happen in any other country in the world! Our ministry has an extremely broad scope of responsibilities, but the main levers of influence, financial levers, are virtually absent. Therefore, degradation of the environment with all of its terrible consequences will not be stopped without fundamental changes in the system of guaranteeing ecological safety, and without a strong environmental-protection policy for the state.

NARODNA ARMIYA: Nonetheless, what has already been specifically done by the Ministry of Environmental Protection in order to stop, or at least, to begin with, slow down the slide of Ukraine into the ecological abyss?

Kostenko: Fundamental principles for this work have been developed by the Ministry of Environmental Protection of Ukraine with the participation of a broad circle of scientists and specialists from the national economy in the concept of the National Program for Protecting the Natural Environment, which we plan to submit for consideration to the Supreme Council of Ukraine in November-December of this year.

The experience of developed countries testifies that for the most part, two levers exist that stimulate ecologically friendly production and energy savings. These are the use of natural resources at a fee and the active implementation of environmental protection measures.

Proceeding from this, the ministry wants to devise a mechanism for assessing the cost of natural resources and fees for their use, to introduce tax relief for resource-effective and ecologically pure technologies, and to impose economic sanctions for the above-the-norm use of natural resources and pollution of the environment, so that it will become economically disadvantageous for enterprises to operate to the detriment of nature.

It is precisely to this end that a special section, "Ecological-Economic Policy," was included in our proposal for the plan of actions of the Government of Ukraine to implement and develop the Foundations of the National Economic Policy in 1993. A government decree issued in September introduced norms for the size of ecological losses associated with environmental pollution and the use of resources. Proposals have been prepared concerning the

establishment of a fixed proportion of state budget expenditures for environmental protection measures and mechanisms for their implementation. The Source ecological bank has been established.

Let us not forget that there are types of environmental protection projects that do not require considerable funds, in particular appropriations from the state budget, and are found within the jurisdiction of the local organs of power. The issue is that the plowing of the bank zones of small rivers should finally stop; straightening their courses and siting cattle farms and complexes and fertilizer and pesticide warehouses in their water-protection zones should be forbidden, and efforts to develop meadows on the banks of small rivers should be made. In this instance, a favorable environmental protection effect may be secured as soon as within a few years. It was precisely to invigorate such efforts that the Green Spring campaign was held in Ukraine on the initiative of the Ministry of Environmental Protection.

'If We Do Not Put Up a Barrier to the Illegal Imports of Toxic Substances From Abroad, Ukraine Will Turn Into a European Trash Dump Rather Than a European State'

NARODNA ARMIYA: You said that the issues of ecological security have an international aspect, as well....

Kostenko: Yes, and a quite weighty one, too. External ecological threats may be either intentional, i.e., ecological aggression, or unintentional in nature—most frequently, these are global changes in the environment and cross-border pollution.

We want to mitigate the unfavorable influence of global ecological changes primarily by making and executing international agreements that regulate the planetary stress of technical origin and by developing national measures for the adaptation of the national economy of the country to these changes.

Ukraine has already joined most conventions regulating global ecological security. Nonetheless, it should be said openly that we are still not ready to implement some of them. Thus, Ukraine still does not have a national program to carry out the Montreal Protocol on the Ozone Layer. Meanwhile, its conditions call for abandoning the use of substances that destroy this layer by 1999.

Ukraine still has not ratified a number of important international agreements. The Ministry of Environmental Protection proposes to ratify them shortly. At issue are, in particular, the convention on climatic changes, which restricts the discharge of gases producing the greenhouse effect, the biodiversity convention, the Ramsar convention on the protection of wetlands on our planet, and the convention on international trade in the species of wild fauna and flora that are threatened with extinction.

As far as measures to adapt the economy of Ukraine to global ecological changes are concerned, their development is envisioned by the aforementioned concept of the National Program for Protecting the Natural Environment.

NARODNA ARMIYA: In the last two years, the uncontrolled importation of various types of waste to the territory of Ukraine has become particularly notorious.

Kostenko: Indeed, this ecologically dangerous dirt is brought in under the guise of a raw material, products of the chemical industry, fertilizer, and so on. Importation of dangerous substances to seven oblasts of Ukraine was registered in the first half of this year alone. Some 700 tonnes of these substances fall into the highest class of toxicity—they are poison to anything that lives.

However, it is perhaps the most terrifying thing that what has been registered constitutes, so to say, the tip of an iceberg, merely a fraction of what is brought in and illegally dumped by the roads, in the forests, in the fields, and in ravines. This is the consequence of an absence in our country of an effective system for the regulation and monitoring of the importation of waste. If we do not put up an effective barrier to the illegal imports of toxic substances from abroad, very soon Ukraine will turn into a European trash dump rather than the European state that all of us wish for.

For this reason, the Ministry of Environmental Protection has developed Temporary Procedures for the Issuance of Permits to Import to Ukraine Recyclable Raw Materials and the Waste That Replaces Them, which, in particular, prohibits the importation of waste to Ukraine for the purpose of storing and burying it. Appropriate instructions have been given to the local subdivisions of the ministry. A proposal has been submitted to the government to establish an ecological control service at the border.

'The Ministry of Defense and the Ministry of Environmental Protection Carry a Weighty Proportion of Responsibility for the National Security of Ukraine. We Should Work Hand in Hand....'

NARODNA ARMIYA: There is no concealing the fact that units of the Army and the Navy have contributed considerably to the processes of deterioration if not the direct destruction of the environment....

Kostenko: Yes, until recently, the activities of the military involving the use of natural resources fell beyond the limits of the jurisdiction of our ministry. The actual absence of control did not result in anything good. The examples of it are without number.

Favorable changes in relations between the Ministry of Defense and the Ministry of Environmental Protection have emerged only over the last 1-1.5 years, after the adoption of the new legislation on environmental protection. Efforts have been made to establish special ecological subdivisions of the Ministry of Defense, ecological inspections have begun to operate jointly. It is gratifying that the recently introduced provisional Internal Service Manual includes a specific provision that binds all commanders to work out and implement environmental protection measures.

Thus, the first specific results have been attained at the level of ministries, which is not the case directly with most units and garrisons.

The Ministry of Environmental Protection is aware of the facts of violations of environmental protection legislation, especially at the Yavor training grounds in Lvov Oblast, which occupy 20,000 hectares. Meanwhile, these training grounds are located in a unique natural zone of the Ukrainian Roztochchya, where the main European watershed passes and runoff to the basins of the Black and Baltic Seas is generated. Considerable harm is done to valuable natural complexes at the "Free Port" training grounds of the Black Sea Fleet aviation, which is located in the center of the Black Sea Biospheric Preserve. In general, it is hard to find a military unit or garrison that is not violating legislation on environmental protection in one way or another.

In general, both our ministries carry their proportion of responsibility for the national security of Ukraine. Therefore, we should work hand in hand.

Efforts to create a system of national security for Ukraine are under way. The ecological aspect of this problem that is the most significant for our young state should be properly codified by legislation. Only by taking an extensive set of ecological security measures will Ukraine be able to overcome the critical condition of the environment and become one of the economically developed and prosperous countries of Europe.

New Problems Connected With Chernobyl Catastrophe Reported

WS1512110993 Kiev VECHIRNIY KYIV in Ukrainian 10 Dec 93 p 1

[Text] It has been over six years since the disastrous Chernobyl breakdown, which is compared by some specialists to a nuclear war. Meanwhile, other dramatic events have shaken the world, and the international community has forgotten the Chernobyl nuclear plant. Ukraine has been left almost alone with its post-Chernobyl problems, which, despite all the forecasts, do not disappear, but grow in numbers. It is not possible to cope with the scope of tasks without help. The Supreme Council Committee for Issues of the Chernobyl Aftermath has held a press conference for Ukrainian and foreign journalists devoted to these problems.

A new problem has appeared, in addition to the old ones, reported Professor Kopeykin, who has been working in Chernobyl since the first days of the disaster, often without any remuneration. All forecasts on the disintegration of radioactive fall-out were too optimistic. Nobody was anticipating that disintegrated plutonium would appear, but the professor found it in the vicinity of the "red forest" in 1989. Dangerous derivatives of plutonium decay were discovered—americium and curium. The issue of including americium in the legislation concerning Chernobyl aftereffects is currently on the agenda. Due to americium's inclination to migrate, the resettlement zone may be expanded.

After all, no one knows where will the winds blow from... Additionally, another issue seems very strange: Why are we calling on the international community to cooperate in

liquidating the aftereffects of the disaster, while simultaneously adopting a resolution on continued operation of the Chernobyl nuclear power plant? Will the radioactive threat be more compelling this way? There is already enough evidence—strontium can be found near Turkey and Italy, not mentioning CIS countries. It is quite understandable why the Belarusian legislature issued a statement objecting to the resolution. The entire world, not only our neighbors, has criticized our position on this issue...

Explanations such as "if we stop the Chernobyl plant, we will freeze in the winter" are naive. As Volodymyr Usatenko, head of the Committee for Scientific, Social, and Legal Issues, emphasized, power units at the Chernobyl power plant, which are using 70 percent of their capabilities due to various malfunctions, are not even able to provide heat for the northern part of Kiev Oblast. To purchase five-year supplies of fuel for the plant, Ukraine needs 350 billion rubles, and it simply does not have such money...

Last year, pointed out Deputy Attorney General Olha Kolinko, no official of the five ministries that are responsible for liquidating Chernobyl aftereffects visited the troubled zone, which is becoming a zone of crime.

Russian Scientist Expresses Grave Concern About Chernobyl

*AU1312132093 Kiev MOLOD UKRAYINY in Ukrainian
10 Dec 93 p 3*

[Anatoliy Martsynovskyy report: "The Black Surprise of Chernobyl"]

[Text] A few days ago, chairman of the Supreme Council "Chernobyl" Commission Volodymyr Yavorivskyy convened a news conference: Journalists met with Russian geochemist Valeriy Kopeykin. Over seven and a half years, the scientist has studied the geochemical consequences of the Chernobyl catastrophe. The following was stated.

The initial optimistic predictions on possible processes of dissolution of the nuclear fallout after the accident turned out to be erroneous, because they did not take into account the laws of the geochemical migration of elements, including radionuclides. Already in 1987, strontium-90 was revealed in the cooler pond; in the summer of 1989, plutonium was found in subsurface waters in the area of the red woods, where radioactive waste was buried. At present, seven and a half years after the accident, there appeared a new and the most dangerous radioactive nuclide—americium-241.

It is a derivative element of plutonium-241 (which, by the time of the catastrophe, was produced at the fourth power unit of the Chernobyl Atomic Electric Power Plant [AES] in quantities greater than those of plutonium-238, 239, and 240 by a factor of 55). From the medical point of view, americium is much more dangerous than plutonium-239, and its half-life period is 433 years. From the geochemical point of view, it must be a good water

migrant. By, approximately, the year 2060, the alpha-activity of americium-241 will become twice that of plutonium.

Thus, a question has arisen of introducing changes into corresponding "Chernobyl" laws of Ukraine, Belarus, and Russia, of expanding the estrangement zone, and of taking necessary comprehensive measures for creating barriers that would prevent a further spread of dangerous radioactive elements, first and foremost, americium-241.

"We felt that Chernobyl would not 'calm down' and that there would be 'surprises,'" said Volodymyr Yavorivskyy. "Here is the first one."

Yavorivskyy called upon scientists of the world to cooperate: If somebody wants to conduct analyses on his own and see for himself the scope of the tragedy, let him arrive; he will be given such an opportunity. The Supreme Council decision on continuing the operation of the Chernobyl AES was criticized.

Meanwhile, the situation at the Chernobyl AES continues to deteriorate. The five-centimeter thick layer of soil around the plant is contaminated. The third-turn channels (that is to say, the fifth and the sixth power units) are constantly contaminated, and so is the cooler pond. According to Professor Kopeykin, subsurface water contamination is increasing. Due to the stoppage, as a result of the accident, of the numerous drainage systems, the level of subsurface waters has risen by between two and four meters, and this also causes the danger of spreading the radionuclides.

The news conference also discussed other Chernobyl-related questions. Volodymyr Yavorivskyy stated, in particular, that the Cabinet of Ministers plans to grant benefits only to first-category victims [of the Chernobyl catastrophe]. At the same time, it was pointed out that much capital goes on unnecessary studies and on excessively large personnel of scientists who work in the Chernobyl system (incidentally, outside the zone). Deputy Procurator General Olha Kolinska encouraged the audience by her decisive mood regarding the struggle against mass abuses in the zone.

Russian Geologist Reveals New Data on Chernobyl Aftermath

*WS1612121593 Kiev KYIVSKA PRAVDA in Ukrainian
10 Dec 93 p 1*

[Report by O. Novak: "Chernobyl Threatens With New Punishments"]

[Text] I remember warnings voiced in 1986, following the accident on the fourth block of the Chernobyl nuclear power plant. Scientists predicted that its consequences will be felt long after the catastrophe. However, these opinions were withheld from the press by censors, and any forecasts that did not match the official standpoint were deemed as a provocation and panicking. Further events proved that official declarations were a pack of lies that caused suffering to many innocent people. This is why today, everything that concerns the Chernobyl accident is not being rejected without looking into it with maximum attention.

This is not being done for the sake of scaring anybody, but for the sake of protecting the health and lives of the living and future generations.

These opinions belong to Volodymyr Yavorivskyy, Ukrainian Supreme Soviet Chernobyl Committee chairman and were expressed at a news conference devoted to the revelation by Russian Doctor of Geology V. Kopeykin. The latter spent seven years conducting tests at the contaminated zone around Chernobyl. Speaking at the news conference, Professor Kopeykin, in particular pointed out that enhanced activity of certain radionuclides have been observed since the accident. In his opinion, previous forecasts regarding the dissolution of the radioactive fallout were erroneous. Thus, it was believed that plutonium would be discovered there within 10 to 14 years after the accident, but it appeared in 1987, in subterranean waters in the vicinity of the "red forest" where nuclear waste was buried. By the way, even then, official sources did not reveal the whole truth, and there were claims that only 3 percent of the plutonium had been emitted into the environment. According to V. Kopeykin, the content of the hazardous component was no less than 30 percent. Professor Kopeykin believes that those forecasts did not take into account the laws of the geochemical migration of radionuclides. According to his calculations, the area contaminated with plutonium is about 100 square kilometers. Other hazardous elements, including americium-241 and icryrium-241 [as published], whose period of disintegration reaches hundreds of years, were found in the area too. These elements are particularly dangerous to the human liver. The mentioned radionuclides were discovered not only in subterranean waters, but also in cuts of pines, birches, and apple-trees growing in the zone.

It is surprising that the scientist's research has received no attention from the Ukrainian Academy of Sciences. The Academy disregarded the official invitation and did not send its representatives to the news conference.

Concluding the conference, Volodymyr Yavorivskyy emphasized that problems connected with overcoming the

aftermath of the Chernobyl accident must be resolved jointly by Ukraine, Russia, Belarus, and the entire European community.

Ukraine Cannot Afford Radioactivity Plant, Nuclear Security

*LD2912205193 Warsaw Radio Warszawa Network
in Polish 1800 GMT 29 Dec 93*

[Text] Ukraine has no money to install the automatic radioactive atmospheric pollution monitoring station that was a gift to the nuclear power station in Rovne from President Lech Walesa.

[Correspondent Olga Iwaniak] The station was to have served the permanent monitoring of pollution arising from the work of this power station, which is situated something over 100 kms from the border with Poland. Meanwhile, the equipment, which is worth \$10,000, is standing idle in the power station warehouse since the power station has got drastically poorer in recent times, has no money for indispensable maintenance and wage payments for employees, and so still less for the construction of cement foundations on which the station could be planted. The management fears that construction of the station without the appropriate security measures at a distance of four kms from the power station, even under guard, will be an attraction for thieves and that the equipment will disappear overnight, within a day.

There are five great nuclear power stations in Ukraine, up to 800 kms from our border, every one of which is going through similar financial difficulties. Their state of security is unsatisfactory, their personnel are demoralized by low wages. There are ever more frequent thefts from the fissile materials stores. Despite these threats, the exploitation of nuclear energy is a necessity for Ukraine—it provides around 40 percent of the electric energy indispensable for the functioning of the state—whereas it will be necessary to pay in dollars for energy sources imported from Russia from January.

REGIONAL AFFAIRS

Greenpeace Details Baltic Sea Chemical, Other Pollution

94WN0110B Moscow ZELENYY MIR in Russian
No 26, 1993 (signed to press 27 Oct 93) p 11

[Statement by Greenpeace in Russia: "'Treasures' of the Baltic"]

[Text] The main military bases to have become sources of pollution of the Baltic are situated in Chernyakhovka and Tartu, where strategic bombers are located, and also the bases of submarines and ships capable of carrying nuclear weapons. These are Kotlin (Kronshtadt), Oranienbaum, Ventspils, Liyepaya, Klaipeda, Paldieski, Tallinn, Baltiysk and Kaliningrad.

Among the best-known incidents in the Baltic are the dumping of chemical weapons which occurred from 1951 through the start of the 1980's and the accident that occurred on a Soviet submarine in September 1981, when several explosions were recorded and the submarine itself, which was carrying nuclear weapons, was towed to a base in Kaliningrad. A similar incident occurred on 27 October 1981, when a Soviet Whiskey-class submarine carrying nuclear weapons ran aground in the area of the Karlskrona Swedish military base. On 25 October 1976 Finnish seismological stations registered an earthquake in the area of the Soviet naval base in Paldieski. Approximately 20 persons were hospitalized, and, according to certain information, a series of explosions at storehouses of the base, which were accompanied by a leak of toxic substances into the Baltic, had been taken to be an earthquake. Releases of radioactive substances from the nuclear power station at Sosnovy Bor have been recorded on several occasions also....

...In addition, leaks of toxic waste from the military plants in Kaliningrad and Riga and also from enterprises mining urano-phosphate in Sillamae have occurred repeatedly.

Dumping of Chemical Weapons

The dumping of chemical weapons and military-produced chemical waste in the Baltic began in 1951. In accordance with an order of Marshal of the Soviet Union R. Malinovskiy dated 16 December 1949, an inspection was conducted at dumps where captured arms of the German, Italian, Romanian, and Japanese armies were stored: mainly aerial bombs, artillery shells, antipersonnel mines, and canister war gas. The inspection was completed by the start of October 1950, and several tens of thousands of weapons not conforming to safety standards were discovered. A decision was made a month later to dump the munitions in the sea. Three regions were selected, in accordance with Marshal R. Malinovskiy's proposal, for the burials: areas of the White and Barents Seas and also the Baltic.

One of the biggest dumps was located at Arkhangelsk Oblast's Obozerskaya Station. A large part of the munitions—antipersonnel mines and artillery shells—was shipped out and dropped in the White Sea. But approximately 200 tonnes of munitions, mainly 50-100 kg aerial

bombs containing sarin, mustard gas, and lewisite from 1938-1939 manufacture were transported to the ports of Liyepaya and Klaipeda for dumping in the Baltic. Some of the munitions of 1941-1943 manufacture stored at dumps at Leonidovka Station near Stalingrad (now Volgograd) were sent to the port of Tallinn. The trains were accompanied by students of the Saratov School for Chemical Defense Forces. One of them, Colonel (retired) Nikolay Masterov, said:

"We shipped the munitions out from May 1951 through November 1955. At the port of Tallinn we transferred the aerial bombs from the trains onto barges of the local maritime shipping company chartered by the Ministry of Defense. As far as I know, the munitions were dumped straight into the waters of the port, and some were taken to the area of Saaremaa Island. The seamen told me that some bombs were shot up at close range to help them sink."

According to the information of witnesses and participants in the chemical weapons sinking operations, burials were carried out in 1961-1968, 1972-1973, and 1979 also. According to Captain 1st Rank V. Nikitin, former deputy commander of Kronshtadt Naval Base for rear support, the sinking of the captured munitions had been completed by the start of the 1970's. According to his information, 235 points in the Baltic and the Gulf of Finland where the burials were performed had been plotted on military maps. At the same time, on the other hand, a considerable number of burial places were not plotted on maps. A. Filippovskiy, a reserve lieutenant captain, who served on transport vessel 324 registered with the Ventspils Naval Base in 1969-1972, said that in half the cases the ship did not reach the point assigned in the order, dumping its cargo at the first point in the sea which it came to, frequently off the coast.

Aside from captured munitions, the dumping of Soviet chemical weapons which had outlived their service life into the Barents and White Seas, the Sea of Kars, and the Baltic began at the start of the 1970's. Ascertaining the precise quantity of weapons dumped is impossible since all the information on this is still under "top-secret" classification. But according to a naval officer who requested that his name not be mentioned, approximately 90 freight cars carrying chemical munitions for dumping arrived at the base in Paldieski in the period from May through July 1975 alone.

Russia's official position on this issue was expressed by Lieutenant General Anatoliy Kuntsevich, deputy commander of Russia's chemical forces. He said in an interview:

"We have never denied that in the 1950's the Soviet Union in conjunction with Great Britain and some other West European countries buried chemical weapons in the Baltic. But I know of not a single instance of the burial of chemical weapons since this time."

Gen. A. Kuntsevich declined to comment on the witnesses' testimony. He observed, it is true, that the burial places are not monitored and that no one knows the present condition of the sunken munitions or their preservation and safety for the environment.

Dumping of Radioactive Substances

The Soviet authorities denied the whole time that they were to blame for the contamination of the Baltic by radioactive substances. Nonetheless, according to witnesses' testimony, at least two nuclear warheads were sunk in the sea in the period since 1964. One of them was lost in March 1976 during a patrol flight over the sea from a MiG-21 fighter registered with the air base in Tartu.

In August 1973 there was an accident on a Golf 2-class submarine registered with the Kaliningrad Base, as a result of which it was decided to jettison propellant in order to maintain buoyancy. As a result of a mistake by the crew, one of the six torpedoes sank into the sea.

Viktor Gerasimenko, who worked from 1984 through 1988 at the nuclear power station at Sosnovy Bor, maintains that water in the station's sumps following the cooling of reactors frequently flowed into the reservoirs flowing into the Baltic.

Dumping of Toxic Waste

Aside from the dumping from submarines and surface ships of the navy which occurred repeatedly as a result of accidents, the warship-maintenance plant in Kaliningrad and the plant manufacturing rocket engines in Riga also dump highly toxic waste in the Baltic. It is practically impossible to establish the precise amounts of the discharges since civilian control inspections and employees of sanitary supervision offices are not admitted to the military enterprises. The results of inspections by military control services are under a "top-secret" stamp.

Aleksandr Kocheyev, who until 1990 was an engineer at the Riga Rocket Engines Plant, said that the plant's waste is usually dumped in the River Daugava without any preliminary purification, from where it subsequently ends up in the Baltic.

Two accidents accompanied by a leak of waste into the sea occurred in 1992. Two phosphate containers were lost from a dry-cargo ship registered to the Tallinn Seaport and en route to Finland. During loading at the port of Riga of a consignment of copper intended for Sweden part of the cargo sank into the maritime bay in July of that same year. During the control inspection it was ascertained that the copper had been heavily contaminated by radionuclides.

Creation of Environmental Council for GATT Recommended

BR1112130793 Paris LE MONDE in French 11 Dec 93 p 20

[Unattributed article: "Brice Lalonde Recommends Creation of Environment Council for GATT"]

[Text] Charged by Edouard Balladur with a "study and proposal assignment," related to the Uruguay Round negotiations, on "the relationship between trade and the environment," the chairman of the Generation Ecologie [Ecological Generation] party Brice Lalonde submitted a report to the prime minister on Thursday, December 9 entitled "Injecting an Ecological Aspect Into the Rules of International Trade."

In this document, the Generation Ecologie chairman first states that GATT "does not intend making environmental protection its watchword, but is instead interested in it because it might upset trade. This negative approach ... is not acceptable. GATT must recognize that it is a legitimate cause to want to protect the environment and to examine how trade can harm or contribute to this protection."

In this context, Brice Lalonde recommends that "an environmental council be created" for GATT, "or for its successor, the world trade organization." With a view to creating this new council, his report proposes that "whatever the outcome of the Uruguay Round on 15 December," negotiators should "remain at the negotiating table to ensure that the signatory states take a decision (or make a statement) concerning the launch of a working program for the environment." He continued: "This decision or declaration must be made when the agreement is officially signed in Marrakesh in April. It should therefore be ready, together with its working program, by this date."

The former environment minister defined a 10-point working program built on the following principles: Begin studies into the environmental impact of the trade agreements; codify the environmental protection measures which affect trade; draw up procedures for the establishment or acceptance of standards; define the ecological limits of fair competition; authorize preferential agreements that favor ecology; and organize, when the environment is threatened, the legal examination and settlement of disputes within a strengthened institution.

When he presented his report to the press, Brice Lalonde made it clear that the prime minister had agreed with the idea of creating an environment council.

Environment Ministers Disagree on Implementation of CO2 Tax

BR1712134593 Antwerp DE FINANCIËLE-EKONOMISCHE TIJD in Dutch 17 Dec 93 p 2

[Article signed KV: "European CO2/Energy Tax Is Total Misfire—EC To Ratify Rio Climate Convention Later This Year"]

[Text] Brussels—The EC member states will ratify the Rio Convention on climate change before the end of this year. They undertake to stabilize the emission of greenhouse gases, but fail to call for a CO2/energy tax as a tool to reach that goal. The EC environment ministers did agree, however, that in five years' time no more than half of the packaging waste should end up on the garbage dump. By then at least one-quarter of the garbage should be recycled.

The "UN Framework Agreement on Climate Change" was solemnly signed in Rio de Janeiro in June 1992. The signing parties committed themselves to stabilize the emission of gases causing the greenhouse effect. On a previous occasion, the EC member states had already agreed to stabilize this emission on the 1990 level by the year 2000. Several countries, including Belgium, had committed themselves to reduce the CO2 emission by the turn of the century. In a common statement, six member states (the

Benelux countries, Germany, Denmark, and Italy) had opted for the implementation of a CO₂/energy tax as a tool to meet their commitments. They had linked the ratification of the Rio Convention to a go-ahead for the European environment tax.

Yesterday, this linkage was dropped after all. It was merely agreed that a whole range of additional tools must be created, and that the talks on the Commission's proposal regarding the implementation of a European CO₂/energy tax must be concluded by the end of 1994. At present, some 40 countries have ratified the Rio climate convention. The treaty will become effective as soon as 50 countries have ratified it.

The EC environment ministers also reached an agreement on the management of packaging waste. Five years after the directive has come into effect, the member states must valorize at least 50 and at the most 65 percent of their packaging waste. Between 25 and 40 percent of the latter must be recycled. Countries such as the Netherlands, Germany, and Denmark might aim at higher recycling criteria, providing they do not disturb the single market and do not jeopardize the directive's implementation in other EC member states. So Germany is no longer entitled to merely dump its waste in neighboring countries. The waste directive must now return to the European Parliament for a second reading, and must then be resubmitted to the ministers for approval.

Sweden, Austria Report 'Breakthrough' in EC Accession Talks

AU2112155893 Paris AFP in English 1536 GMT
21 Dec 93

[By Graham Brown]

[Text] Brussels, Dec 21 (AFP)—Sweden and Austria reported a breakthrough here Tuesday in their negotiations to join the European Community along with Norway and Finland on January 1, 1995.

They said the four countries had won the right to maintain high environmental and health standards which exceed the E.C.'s harmonised single market rules.

Swedish European Affairs Minister Ulf Dinkelspiel said: "This is a major breakthrough."

The term was also used by Austrian Foreign Minister Alois Mock to describe the enlargement negotiations which must be finalised by March 1 next year if the four applicants are to join the E.C. as scheduled by the 1995 target date.

Tuesday's negotiations between E.C. foreign ministers and their counterparts from the four applicant countries did not touch on agricultural subsidies—the most controversial unresolved issue.

Norway, Finland and Austria are all insisting on retaining their high levels of protection for fragile Alpine, Arctic and sub-Arctic farms, which are far higher than the maximum levels permitted by the E.C.

But Mock said he believed this problem could be overcome by the target date of March 1.

E.C. officials said the candidate countries had been given a four-year period—until 1999—to maintain their high environmental standards after joining the E.C.

Over that period the E.C. will try to raise its own standards to match those of the newcomers.

The decision applies to such issues as automobile emissions, lead-free petrol, product health labels, waste disposal and restrictions on toxic substances.

The E.C. had earlier objected that excessively strict "green" regulations could hinder the free flow of products around the enlarged community.

But the four countries all replied that their electorates would not tolerate a lowering of environmental standards as the price of joining the E.C.

Pressed on whether Sweden and the other three countries might have to lower their standards after 1999, the Swedish minister said: "There is no reason whatsoever to believe that there will be any lowering of standards."

In another concession, the E.C. also gave Swedes an exemption from a community health law that bans wet snuff or "snus"—a tobacco derivative.

And Sweden will be allowed to continue selling snus to Norwegians.

Dinkelspiel called this a "Christmas present" from E.C. negotiators, which overcame emotional Swedish resistance to any ban on wet snuff.

Sweden will also be allowed to maintain a state monopoly on retail selling of alcohol, but not on liquor imports or wholesaling.

The monopoly, an attempt to limit alcohol use, contravenes E.C. free trade regulations.

Diplomats said the four candidate countries had unconditionally accepted most of the E.C.'s Maastricht union treaty, which came into force on November 1.

It provides for common foreign and security policies, economic integration leading to a single currency, and cooperation in immigration and justice affairs.

However, there was no final accord on the single currency issue because of a Spanish threat on Monday to hold up the enlargement negotiations on the grounds that the four candidate countries, being relatively wealthy, would upset the economic balance in the E.C.

Spanish European Affairs Minister Carlos Westendorp had said enlargement would make it more difficult for Spain to qualify for a single currency bloc by 1999.

But Mock said this was just an "internal problem" of the E.C.

And Dinkelspiel warned that the four candidate countries would not accept any special rules to reduce their influence in the process to decide when the single currency bloc would be established and which countries were eligible to join.

FINLAND

Energy Policy To Stress Natural Gas, Renewable Sources

94WN0113A Helsinki HUFVUDSTADSBLADET
in Swedish 25 Nov 93 p 6

[Article by Katarina Koivisto: "Finland Should Take Care of Its Own Nuclear Waste"]

[Text]

- In the future, Finland should take care of the nuclear waste that is produced in this country. The Ministry of Trade and Industry will look into what changes are needed in legislation and prior administrative decisions to guarantee this. As large a part of basic energy needs as possible should be supplied by natural gas plus solutions involving new technology based on peat, wood, and other domestic energy sources. It may be necessary for the state to participate in finding another supply source for gas. The permit procedure in connection with importing electricity will be retained to enable the state to supervise the safety and environmental acceptability of the imported energy.

These three points are new features in the energy policy statement the government sent to the parliament on Wednesday [24 November]. The statement clearly reveals a more positive view of natural gas, but it points out that it will not be possible to import Norwegian gas to Finland before the beginning of the next decade at the earliest.

"Nothing new has happened," said Marketing Director Harry Anton of Neste. "We are in constant contact with both the Swedes and the Norwegians, but there is still no one in Sweden who plans to start importing Norwegian gas. A pipeline through Sweden is needed to get the Norwegian gas to Finland."

Nevertheless, Anton sees the statement as a positive signal from the government and hopes it will also be regarded in this light in Sweden. The negotiations with Norway are becoming more urgent in view of the fact that the Norwegians must eventually decide where they are going to build supply pipelines for their gas. On the other hand, the Meripori coal power plant and the combined power plant that will probably be built in Skoldvik will provide new electricity production capacity, giving Finland a little more time in the natural gas negotiations, Anton pointed out.

Electricity Needs Increase

The government's energy policy statement assumes that electricity consumption will increase at an annual rate of 2 percent during the next 10 years. This means that Finland will need 2,000 MW in new production capacity by 2005 and 3,500 MW by 2010. The need is based on the fact that, in addition to increased consumption, old capacity will be phased out.

Imported electricity is one alternative in the energy policy statement, but the government assumes that it will be

imported only from countries that observe international environmental agreements and safety regulations.

In practice, such a decision could eliminate the importation of electricity from Russia and the Sosnoviy Bor nuclear power plant outside St. Petersburg. However, Finland has an import agreement with Russia that will be in effect until 1999, and production director Anders Palmgren of Imatran Voima [Finnish power-generating company] says it would not be easy to break the agreement. Determining who is complying with international safety regulations can be difficult, he indicated.

Nuclear Waste Alternative

Finland also has an agreement in effect with the Russian authorities with regard to nuclear waste from Lovisa, and Palmgren sees no reason to break the agreement. Theoretically, nuclear waste from Lovisa can be shipped back to Russia as long as the power plant is in operation, Palmgren said, but the commercial terms are renegotiated every five years. The current commercial agreement will be in force for another four years, and Palmgren did not think it should be broken.

"It is true that we have the alternative of taking care of our waste ourselves, we have had that all along," said Palmgren. "But the money we now pay to have our waste taken care of and processed in Tschelyabinsk also helps the Russians finance the cleanup of the area, which suffered heavy radioactive contamination in the 1950's."

Palmgren thought the government had yielded to outside political pressure in formulating its statement and pointed out that it would certainly be possible to provide final underground storage for the waste from Lovisa in Finland, but that it would be a barbaric way to dispose of it. In this case usable fuel would also be buried while long, medium, and short-lived waste would all be mixed together.

Therefore Palmgren feels it is better to send it to Russia now that it is also possible for both Imatran Voima and Finland's Radiation Safety Center to check that the waste is handled properly.

Old Formula

In other respects Wednesday's statement repeats the government's old formula for the economic management of Finland's energy. One element is energy taxes to make energy use efficient and achieve the environmental goals that have been set, another is a revised program to cut energy use and sector agreements on energy-saving measures in industry.

The government also wants to increase the use of bioenergy and other domestic energy. To promote this goal, increased support will be given to research in new technologies applicable to gasification plants, among other things. It will become easier for small-scale power plants to enter the electricity network and the possibility of increased electricity production in connection with the cellulose industry will be studied.

The government is also stressing the development of energy technology and will subsidize export efforts in this area. In addition, the electricity market will be deregulated and there will be increased competition. Previous emission goals will remain in effect in the energy sector, sulfur dioxide emission must be cut 80 percent in relation to the 1980 level, nitrogen dioxide emission 30 percent, and carbon dioxide emission will be checked at the end of the 1990's.

Industry Dissatisfied

Industry's Energy Association feels the government's energy policy line is still based on empty phrases just as it was after the negative decision on nuclear power. The association's president, Pentti Sierila, says the government's energy statement is not in line with the good goals that are presented at the beginning of the statement.

"The energy policy line that has now been presented is based on hopes and comprehensive state subsidies in the belief that energy needs can be satisfied through the increased production of bioenergy and by implementing the purchase of natural gas from Norway," Sierila said in a comment on the statement.

He is surprised that the government does not say anything about the price of energy. He feels the structure and level of energy taxes should be reconsidered.

"The line that has now been presented will inevitably increase the use of fossil fuel and thus make it impossible to achieve the environmental emission goals Finland has committed itself to internationally," Sierila said.

Greenpeace Approves

The environmental organization Greenpeace is pleased with Finland's decision to stop exporting nuclear waste to Russia. Imatran Voima has shipped highly radioactive nuclear waste from Lovisa east of the Urals 11 times.

Greenpeace has launched highly visible campaigns against the shipment and processing of nuclear waste in various parts of the world. Protests have been organized in such countries as Finland, Sweden, Russia, Germany, and England.

FRANCE

Commission Admits Carrying Out 192 Nuclear Tests

AU1112172293 Paris AFP in English 0124 GMT
10 Dec 93

[Text] Paris, Dec 10 (AFP)—The French Atomic Energy Commission (CEA) announced late Thursday [9 December] that France had carried out 192 nuclear tests, saying that previous reports of 161 tests were a mistake.

The announcement came in response to calls from environmentalists Greenpeace to "lift the secrecy" surrounding the number of French tests.

Greenpeace had said it was astonished that official and parliamentary figures on the exact number had varied.

But the CEA admitted that the figure of 161 it had published in a report had been a "material error" and that the correct figure was 192 as stated in April by CEA director general Philippe Rouvillois.

It said late Thursday that the number of French tests up to a moratorium imposed in April 1992 "was indeed 192."

The United States this week reported that it had not revealed some 204 tests.

France, UK 'Lack Political Will' To Protect North Sea

BR1612132993 Paris LE MONDE in French 14 Dec 93
p13

[Alexandre Varin report: "France and Great Britain Accused of Polluting the North Sea"]

[Text] Eight European countries bordering the North Sea, plus Switzerland (via the Rhine River) expressed concern on 7 and 8 December in Copenhagen on that sea's poor state of health due to pollution of oil, nitrogenous by-products, nontreated sewage, radioactive waste, and the release of sulfur and heavy metals into the atmosphere.

But only four of them (Denmark, Norway, the Netherlands, and Sweden) were represented by both their ministers of environment and agriculture. Pleading the GATT negotiations, Germany and France sent higher civil servants, just like Finland and Switzerland. According to Greenpeace and the World Fund for Nature, this shows that "there is no real European political will to protect the North Sea."

However, the report drawn up by a working group is crushing: 1.7 million tons of nitrogenous substances (ammonia, nitrates) are dumped into the sea every year, 900,000 tons of which come from agricultural activities. This leads to a rarefaction of oxygen in the marine environment. The efforts made since the conference held in The Hague in 1990 have not improved the situation and the states that border the sea almost unanimously admit that it will not be possible to reduce by half the dumping of nitrogen and phosphates by 1995, as expected.

All the more, as Danish Environment Minister Svend Auken pointed out, since "industrialized countries like France, Great Britain, and Norway continue to dump nontreated sewage water from the cities into the sea." "Those countries," he added, "lack the courage to impose sacrifices on their citizens in order to pay the costs of filtering stations." Mr. Auken emphasized that "Denmark has spent ECU1 billion in taxpayer money to clean waters carrying sewage."

Taking place before the major 1995 conference that also is to be held in Copenhagen, this intervening meeting discussed various types of pollution, whose scope was not known, including the smoke from ship stacks or the dumping of oil during illegal degasification of ships, not to mention the leaks and other incidents in the 4,000 [oil] wells and the 140 offshore oil and gas rigs in the North Sea.

"Even more outrageous and more dangerous is the release of radioactive waste from the Sellafield nuclear recycling plant" (northwest England), reported Greenpeace during the meeting. The British delegation, which included the agriculture minister, has not reacted to the protest, which was supported by Denmark, which has requested that an end be put to the release of such waste. Great Britain is the only country that has not published data on the reduction of pollutants in the North Sea.

Government To Sign Ban on Immersion of Nuclear Waste

BR2212095993 Paris LE MONDE in French 22 Dec 93 p 12

[Unattributed article: "France Signs the Convention of London on Ban of Immersion of Nuclear Waste"]

[Text] France has decided to sign the international Convention of London on the "total and definitive" ban on immersion of nuclear waste, Environment Minister Michel Barnier disclosed on Monday, 20 December. France thus joins the 37 states, including the United States and Japan, which decided to sign [the Convention] last month during a meeting in London.

Although France has not dumped any radioactive waste in the sea since 1969, it abstained from signing, together with Belgium, China, the United Kingdom, and Russia. France only sought a simple renewal of the 1983 moratorium, so that it would retain the right to reassess the problem "in 15 years in light of the scientific knowledge at that time."

However, the majority vote on 12 November was accompanied by a clause: The countries abstaining from voting and the 29 nations not present in London would have 100 days to vote for or against [the convention], otherwise they would be excluded from the convention. "In compliance with Prime Minister Balladur's willingness to conduct an energy policy respecting the environment," says Michel Barnier's message, but also due to the lobbying of the ecological movements, the French Government, which could have saved itself the trouble of a controversy by signing the convention last month, has thus come into line with the resolution adopted in London.

GERMANY

1994 Budget Cuts Affect Environmental R&D

BR2712094893 Wuerzburg UMWELTMAGAZIN in German Nov 93 pp 34, 37

[Article by Jochen Wagner: "Crafty Accounting in Toepfer's Budget—Little Future for New Environment Projects"]

[Text] The Federal Government intends to spend an overall total of more than 478 billion German marks [DM], DM1.35 billion of which have been allocated to Federal Environment Minister Klaus Toepfer. The opposition prophesies doom: "He can't even pay the branch office's phone bill with that." In spite of the budget cuts

announced across the board, the environment minister can still show an increase of about DM90 million on paper.

According to the present draft, the Environment Ministry's budget includes a total of DM626.9 million in individual budget 16 solely for the Federal Radiological Safety Office in Salzgitter, the major item - around DM549 million—being the neutralization and permanent storage of radioactive waste.

Over DM151 million have been earmarked for reactor safety and radiological safety, including DM21 million for improving plant safety at Soviet-design nuclear power stations. About DM52 million have been injected into the budget for nuclear safety purposes. Other major budget items are the ministry itself, with about DM100 million, and the Federal Environment Agency with around DM93 million. The Federal Research Station for Nature Conservation and Rural Ecology has DM20.3 million, nature conservation in general receiving DM67.4 million.

Job Cuts

The Federal Environment Ministry as such shows a total of 806 established posts for 1994—34 less than this year. Posts at the Federal Environment Agency have fallen from 839 to 824, whereas jobs with the Federal Research Station have increased from 189 to 195. The Federal Radiological Safety Office is reducing posts from 580 to 574. This means a cutback from 2,448 to 2,399—an overall loss of 49 posts.

The environment minister was shown no pity by his political competitors in the battle for cash. The costly "dinosaurian technology" that nuclear power entailed was held up as the main culprit for the financial imbalance within the environment budget. "We deplore the fact that, yet again, you have emerged from this year's budget savings round stripped bare. You owe your budget increase to crafty accounting. Permanent items in the radiological safety and reactor safety section artificially inflate the budget, but the room for maneuver in your appropriation is becoming smaller and smaller. More and more money is being spent as a result of the Federal Government's failed nuclear policy, and at the same time less is going to pioneering environment technologies, environment research, and traditional nature conservation, not to mention investment in the environment in the new laender," said SPD [Social Democratic Party of Germany] deputy Marion Caspers-Merk, criticizing the new budget in the Bundestag.

To rub salt into the wound, she accused the Federal environment minister of "incompetence in environment policy," referred to Toepfer's statements in the media as "a mixture of attempts at self-justification, buck-passing, and juggling with words," criticized his "passive stance," and opined that, "Toepfer the environment policymaker has no fight left in him."

Klaus-Dieter Feige (Alliance 90/Greens) said, "The emptiness of environment policy also finds expression in the federal budget for 1994. Once funds for radiological safety

have been deducted, all that remains to the Federal environment minister is a risible DM200 million, about DM80 million less than in 1993."

Dagmar Enkelmann (PDS [Party of Democratic Socialism]/Leftwing List) described the Bonn Environment Ministry's new budget as a "hoax package or an atomic waste budget." "With over DM1.3 billion, the 1994 draft budget shows an increase of 7.1 percent over 1993. However, viewed realistically, the environment budget remains stationary at 0.3 percent of the overall budget."

Hans Georg Wagner of the SPD said, "It is not hard to see that the environment minister is once again the great loser. The actual environment and nature conservation sector has suffered a DM64 million or 3.3-percent cut in real terms. If we add the cuts suffered in the 1993 budget, the environment's share in the budget has taken a 17-percent cut since 1992. Since 1992, when the situation in the new laender caused an explosive growth in environmental problems for us all, the budget has shrunk by nearly one-fifth. We no longer have an environment policy in the true sense of the term. The federal environment minister is a loudspeaker for environment policy."

"Looks" Do not Matter

In his 10-minute speech, the federal environment minister barely referred to the massive objections voiced by the opposition. Instead, Toepfer trotted out a series of well-worn statements, brandishing a sort of balance sheet as his contribution to the budget debate. "Our environment policy in Germany has created jobs. Environment policy currently provides employment for 680,000 people in Germany. About 50,000 people are directly employed in environmental reclamation as a labor market policy measure. In recent times we have employed 120,000 people under job creation schemes. About 15,000 people are usefully employed on reclamation work in the lignite mining industry. The federal and land governments spend DM2-3 billion a year on this item; this spending does not appear in my budget, but 75 percent of it is borne by the Federal Government. What matters is that we get the environmental reclamation done, not whether I would like a better-looking budget."

Toepfer pronounced himself in favor of the creation of a disposal infrastructure involving private industry. "We need an environmental infrastructure for sewage treatment and waste disposal facilities, and for reclaiming contaminated land that we have inherited from the centrally planned economy of the former GDR. We want to attract private capital as well for this purpose. In the new federal laender, 46 sewage treatment plants are currently being planned or built, or have already been completed, with private capital—DM4.3 billion are being mobilized. I should be happy if as many private sewage works had been built in the original federal laender in the whole 40-year history of the Federal Republic. Hats off to those who have assumed responsibility there and achieved this. This is growth policy and environment policy rolled into one. We shall pursue it to the best effect."

Morsleben Can Still Be Used

Referring to the dispute over nuclear waste disposal, Toepfer stressed that all forces in the Federal Republic, regardless of their ideas as to the duration and exploitation of nuclear power, had to reach a consensus on disposal. Referring to the controversial Morsleben permanent disposal store, Toepfer said: "Morsleben can legally be operated until the year 2000. The Nuclear Safety Commission has pronounced the Morsleben store still usable. The storage quality will be changed, and the waste will not be stored at the taxpayers' expense; the cost will be passed on in the form of fees to those who store material there."

Toepfer said that he aimed to abolish ecological subsidies. This meant altering prices, as prices changed behavior and brought about technological developments. This road toward an ecological market economy was more successful than ecological regulations imposed from above or planned economy considerations. The Federal Republic already enjoyed a worldwide reputation for environment engineering.

Individual budget 16 also features a couple of interesting items. For instance, the federal minister receives an annual salary of DM275,000 inclusive of local weighting, plus an annual official expenses allowance of DM7,200 and a per diem allowance, albeit reduced to take account of the per diem etc. to which he is entitled as a Bundestag deputy. The parliamentary secretaries of state receive annual salaries of approximately DM65,000 less. The "secret fund" at the minister's disposal for extraordinary service-related expense in special cases contains another DM60,000 for 1994, and there are DM380,000 more for public relations work. Another DM14.7 million are earmarked for work designed to raise public awareness (pamphlets, films, informative material), inclusive of DM69,000 for technical publications.

DM325,000 are budgeted for the official vehicle fleet, and an approximate total of DM3.8 million for traveling expenses, DM3.5 million for the ministry's telecommunications bill, and just DM2.6 million for data processing. Long-distance data transmission alone costs around DM300,000. The books and periodicals budget amounts to DM995,000.

The German Nature Conservation Circle receives DM485,000 and the German Council for the Care of the Countryside DM321,000 in subsidies. Further subsidies to the tune of DM450,000 are awarded for schemes run by various nature conservation groups and associations. DM3.6 million are earmarked for dues payable to international organizations, and the United Nations Environment Fund due amounts to DM10.8 million. Dues to smaller international organizations (waterfowl research, lesser whales) come to about DM1.75 million. The Association of German Engineers receives about DM3 million for the "clean air" program, and a similar sum goes to the Environmental Standards Institute. Operating expenses for the Environmental Sample Bank, which will gradually begin to cover the whole federal area from 1994, rise from the current DM5.5 million to DM6.86 million.

Party disputes notwithstanding, as far as alternative figures in the Bonn government camp are concerned, SPD environment spokesman Michael Mueller said, "If Toepfer were to go, it would be even worse." [Box p 37] Brief Interview: Grave Error [box head]

The interview with Federal Environment Minister Toepfer was conducted by our colleagues from the French periodical L'ENVIRONNEMENT MAGAZINE [EM], which publishes the original version in full and which has kindly allowed UMWELTMAGAZIN to print the following extract.

[EM] Do you really believe it is possible to reconcile the market economy with ecology?

[Toepfer] To be perfectly honest, yes. But the market economy can only solve its problems if it absorbs its environmental protection costs. In a market economy, everyone tries to cut costs or offload them on to others or onto nature. This is one of its basic principles. My motive for introducing environment taxes is not to take more money from the taxpayer but to induce polluters to mend their ways. German industry complains about an excess of environmental protection charges and claims that this is detrimental to competitiveness. The professional associations echo this cry. I have never tired of repeating that a proper environmental policy creates new jobs, but in the current time of crisis the first item to be deleted from the budget is environmental protection. In my opinion, this is a grave error that will create enormous problems in the future.

[EM] Are GATT and environmental protection compatible?

[Toepfer] Of course. I have recently discussed this with Brice Lalonde, who is currently drafting a report on this very issue. In any case, I believe that environmental protection as a concept must gradually find its way in so as not to halt the GATT machinery, by which I mean not leaving those countries that practise ecological dumping a free hand.

Government Reports on Conditions of Forests

94WN0099B Bonn DIE WELT in German 1 Dec 93 p 5

[Article by Karl F. Wentzel: "Trees in Germany Dying Earlier and Earlier; The Forest Supervisor: Now Beeches and Oaks Are Hit"]

[Text] Tomorrow Agriculture Minister Jochen Borchert will present the eleventh report on conditions of forests. Last year's report, with a slight increase of noticeable leaf loss by 2 to 3 percent, so far marks the climax of all studies. It is noteworthy that the trend of damage continues from coniferous to deciduous forests.

If one wants to know more, one must relate all foliage findings between 1983 and 1993 to the up-to-date air quality measuring results and compare those data to the research findings and forestry experience of pollution effects. That leads to the following conclusions:

—German forests have significantly sparser needles or foliage than 15 years ago. One of every four trees shows a drop in foliage of over 25 percent, thus being in damage categories II to IV. Until 1985, this applied only to coniferous trees; now it applies to almost all types of trees.

—Needle loss and treetop thinning occurred even centuries ago near metal works and, since 1850, also in large areas of industrial regions. But this old damage has disappeared in West Germany since the building of high smokestacks as of 1964, and the 1983 order on high capacity furnace installations.

—The large-scale forest death since 1960 at altitudes above 700 meters in the Erz, Iser, and Riesen Gebirge, caused by high sulfur dioxide pollution, has spread in west Germany only to border areas near the former GDR (Harz Mountains, Fichtel Gebirge). In the area it is confined to the regions of the large brown coal power stations in Saxony and Bohemia.

—In the eleven previous and present reports on forest conditions, the emphasis of top thinning has shifted from coniferous to deciduous trees. In 1983, it reached a first high watermark with 23 percent of fir and pine trees, dropped to 14 percent by 1989, and then rose again to 24 percent by 1992. In a scissor movement, defoliation of beech and oak trees rose from 11 percent (1984) to 32 percent (1992).

"But the Forest Will Not Die as Long as Foresters Nurture it Expertly"

—This change in vulnerability of tree types can only be explained by the drastic change in air chemistry, i.e., the increase in nitrogen compounds and ozone with a simultaneous decrease in sulfur dioxide.

—For all types of trees, strong defoliation independent of the pollution type is concentrated in forests over 60 years old; in many forests it then intensifies to the dying of shoots and treetop deformation, and finally ends in premature death of the most sensitive individual trees and gradual forest dissolution. Thus air pollution leads to early aging and senescence. Science calls this 'senescence acceleration.'

—The same trend is also indicated by the scarcely acknowledged experiences registered again and again by some 50,000 foresters of Central Europe in their daily on-site work in the less foliated and sometimes prematurely dying forests. But wherever, however long, and however intensively pollution has damaged forests and soils:

A new greening or reforestation of the areas is possible, even with the highest soil acidity;

Ground vegetation becomes more profuse, thereby in many places becoming an increasingly bigger obstacle to reforestation.

The analyzed facts and findings make clear that the present widespread forest diseases are caused primarily by micro-chemical interference with the metabolism of leaf organs. Acid rain also leaches vital nutrients from the leaves and soil. Climatic changes, weather extremes, and pests can also accelerate the premature decay of the forest.

In regions particularly exposed to pollution, forests have hardly any prospect of reaching the forestry-desired age (on the average, firs reach the age of 100, oaks that of 180 years). After 40 years of professional work on recognition, effect, and prevention of pollution damage to forests, I consider "the age loss" of trees the worst effect of the new, far-flung air pollution on forestry and land culture. But the forest will not die as long as foresters nurture it expertly, fertilize it purposefully, and reforest immediately—be it the case after only 60, or after 180 years.

The Professor: Damage Through Environmental Protection

The environmental protection of past years has hurt rather than helped the forest. That is the claim of Professor O. Schenck, founding director emeritus of the Max Planck Institute for Radiation Chemistry in Muelheim/Ruhr. His accusation: Since the mid-1950's, filter installations increasingly hold back flue ashes and flue gases—because they are considered pollutants under the federal pollution protection law.

But the dust contains useful substances vital for trees: minerals such as lithium and fluorine, sodium, potassium and calcium, iron, phosphorus—and above all magnesium. It forms the central atom of the green pigment, chlorophyll. For instance, if magnesium is lacking, the leaves turn yellow.

Every year, 125 kilograms of Sahara dust fall on every hectare of southern Italy. The minerals contained therein neutralize the sulfurous gases emitted by the volcano, Mt. Etna. In Germany, the annual amount of dust is 25 kilograms per hectare. Observations in the surroundings of cement factories showed: After filter equipment was installed, soil acidity increased noticeably. Because: The emissions of sulfur dioxide were not reduced to the same degree. So the percentage share of sulfur increased in the air. Today, the proportion is about 1:8. The smaller amounts of dust no longer suffice for complete neutralization. As a consequence, acid rain results.

GREECE

Solid Waste Recycling Capacity Summarized

BR1312152193 Copenhagen ISWA TIMES in English
No. 4, 1993 p 17

[Article by Andrew Kouskouris: "Solid Waste Recycling in Greece"]

[Text] According to Council Directive 85/339/EEC of 27 June 1985, on containers of liquids for human consumption, the government issued the bi-ministerial decision No. 31784/954/8.4.90/251/B* on the types of packaging of liquid foods. There is also the Directive 91/156/EEC which covers some aspects of recycling—reducing the wastes.

Composition of Refuse

In 1984-85 the composition of the refuse in the Greater Athens Area was:

—Organic:	58.5 percent
—Paper, Cardboard:	19.2 percent
—Plastics:	7 percent
—Glass:	2.5 percent
—Metal:	3.75 percent
—Rubber, Wood:	3.5 percent
—Inert:	1 percent
—Rest:	4.55 percent
—Total:	100 percent

Until recently, the average composition of waste in Greece was difficult to measure, however, new measurements in some areas shows that Greece is slowly, very slowly, approaching the composition of the middle European Consumer, especially as the organic fraction is reduced and the packaging fraction is increased.

Recycling

Recycling is operating through source separation systems and the results in Greece for 1991 were: paper, 32 percent; glass, 20 percent; aluminium, 26 percent.

Recycling Projects

1. During the period 1990 till 1992, the Ministry of the Environment directed a number of awareness programmes aimed at the elementary and secondary schools (approximately 10,000 students in all). The total quantity of source separated materials was as follows:

—Paper:	110 tons
—Aluminium:	10 tons
—Glass:	2 tons

[Box] Consumption of Aluminium Cans as a Percentage of Total Recycling [box head]

—1985:	130 million cans (8 percent)
—1986:	230 million cans (11 percent)
—1987:	280 million cans (13 percent)
—1988:	430 million cans (17 percent)
—1989:	480 million cans (21 percent)
—1990:	500 million cans (25 percent)
—1991:	650-700 million cans (26 percent)

(Source: Report from the Ministry of Environment—85/389 EEC. Hellenic Aluminium Company) [box end]

2. Seventy-five municipalities and communities have started source separation programs mainly for paper and aluminium cans. The Municipality of New Psychiko was the first to begin a source separation program. Presently,

New Psychiko Municipality has started a source separation program and has constructed and currently operates a park for ecology including a train where schoolboys give aluminium cans to have a ride. The population of New Psychiko's Municipality is only 14,000 inhabitants.

3. In the biggest landfill in Greece, and one of the biggest in Europe which is located in Athens, which has a capacity of 3,500 tons per day, has been constructed and is managed by the Association of Municipalities and Communities in the Attika Region; a pilot plant for recovery of refuse (Refuse derived fuel (RDF) and compost) with a capacity of 2.5 tons per hour.

The above mentioned Association has planned and is currently purchasing equipment to set up a source separation project for paper in 13 municipalities with a total population 500,000 inhabitants.

There is a study for the management of small hazardous wastes into the municipal wastes. It will be finished within the near future.

4. A compost plant is being built in the Municipality of Kalamata which will have a capacity of 80 tonnes per day plus 10 tons of sludge. It will be ready next year.

5. The private sector which is partially represented by the Hellenic Company of Recovery and Recycling (51 companies which produce and distribute packaging products) is due to begin this year with a full-scale pilot program for source separation in all packaging materials.

6. There are four MEDSPA waste management programmes that cover recycling, two on Naxos (compost and source separation), one in the Municipality of Argostoli and one in the municipalities of Rio and Antirio.

7. Many seminars take place every year to educate local authority personnel in waste management including recycling (mainly source separation). The Government, through the Ministry of the Interior, collects information on municipal waste management for all local authorities having population over 2,000 inhabitants.

The Technical Chamber of Greece, after a study which finished in June of 1993 ("Needed Actions for the Protection of the Environment in Greece") estimated that:

a) A full-scale source separation programme during 1993 till 2005 could reach a target of 100 percent of the recyclables with a total cost of 13 billion drachmas.

b) An estimated 60 percent of the total produced quantity of wastes per day all over Greece which is about 8,000 tonnes will be recycled or composed of (mechanically or some other method) with a total cost of 72 billion drachmas.

c) There is a sound proposal for founding an Institute of the Environment which will also handle the recycling, reducing and minimization of wastes.

IRELAND

'Huge' Increase in Toxic Waste Dumping Noted

94WN0104A Dublin IRISH INDEPENDENT
in English 12 Nov 93 p 4

[Article by Tony O'Brien and Jerome Reilly: "Minister Warns on Toxic Waste"]

[Text] Twenty five thousand tonnes of highly dangerous poisonous waste is being illegally dumped every year in this country—and nobody knows where it is going, a government minister admitted yesterday.

Environment Minister Michael Smith said the country had to face up to the huge increase in the amount of toxic waste being produced and see how this could both be reduced and disposed of.

Ireland is now producing some 70,000 tonnes of officially classified toxic waste every year. And while 10,000 tonnes of this is disposed of abroad, and more incinerated by individual companies, thousands of tonnes remain unaccounted for.

"We have to presume that some 25,000 tonnes of poisonous waste is being dumped on ordinary landfill sites and other locations," said Mr Smith, who added: "In truth, we don't know where these highly dangerous substances are ending up."

Pointing out that Dublin produced more toxic waste than the rest of the country, Mr Smith again hinted that a national waste incinerator may be the preferred option.

But he stressed that no decision has yet been made on the issue. "I have already stated my view that incineration should not be excluded as a viable disposal option," he said, adding that new proposals will follow a major conference on hazardous waste being organised in January.

"The toxic waste being dumped is a hazard for people living here now and for future generations," he said. Another problem was the disposal of around 10,000 tonnes of clinical waste being incinerated in hospitals.

Decisions would have to be made. "We are producing more and more waste each year but we don't want landfill sites and we don't want incinerators but we have to face up to the problem and early next year we will make a decision one way or another."

NORWAY

Pigment Used Against Radioactive Contamination

94EN0146Y Oslo AFTENPOSTEN in Norwegian
16 Nov 93 p 13

[Article by Kjell Dragnes: "Wild Growth in the Wake of the Accident"]

[Text] Chernobyl/Kiev—"The zone"—it is only spoken of that way by those in the know—that restricted area 30 kilometers in diameter around the power plant, has become a huge testing and research area. Six and one-half years after

the explosion and the fire at the nuclear power plant—which began on 26 April 1986—the effects are being observed on people, animals, and plants. For researchers it has become a mecca. Here they hope to find answers to what man-made radioactivity does to the environment and those of us who live with the environment.

It is important to learn this, not just for the Ukrainians, but also for other countries with nuclear power and for countries without nuclear power. Because contamination knows no borders. The zone is uninhabited; 163,000 people were evacuated from the region. But beyond the zone people live. People live in Valdres in Norway, where there are places that are just as contaminated with radioactive materials as the soil and the woods in the vicinity of Chernobyl.

Berlin Blue

The effects of this contamination could have been very great, in economic and health terms, if it had not been for Berlin blue.

"It might sound like boasting, but the fact is that the Norwegian initiative with Berlin blue is almost the only successful research project in Chernobyl, in Ukraine, in Belarus, and, not least of all, here in Norway," said Per Strand, a researcher at the Norwegian Radiation Protection Agency. Since 1990, and together with Brit Salbu and Knut Hove, professors at the University of Trondheim's College of Arts and Sciences [NLH], he has been working with Ukraine, Belarus, and Russia on the fallout from Chernobyl.

The pigment, which was first produced in Berlin in 1704, hence the name, contains a complex iron ion ($\text{FeIIFeII}(\text{Cn})_6$) which has proven effective as a binder for radioactive cesium, Cs137 . The first research on Berlin blue was carried out at the Radium Hospital in the sixties; later a method was developed using Berlin blue as an additive to blocks of salt lick and as a pre-additive. This was done at the Norwegian Agricultural College, which in 1991 tested tablets in Ukraine, Belarus, and Russia—with fairly remarkable results.

Berlin blue works in such a way that radioactive materials are not absorbed into the body or turn up in meat and milk. An absorption reduction of some 90 percent means that large contaminated areas can still be used by people and animals.

How important this is in economic and health terms can be illustrated by the following figures:

In Ukraine, more than 7 million hectares of ground have been contaminated by Cesium 137, so the radioactivity is over 1 curie per square kilometer (calculated another way: 37,000 becquerels per square meter). Today 2.6 million people live in this area. Between 1986 and 1991, Ukraine spent over 15 billion karbovanets to neutralize and reduce the effects of the fallout. Even if inflation is high and Ukraine's currency is still dropping in value, this is nevertheless a very major burden.

In addition, there are huge areas in Belarus, especially around Gomel. And areas in Norway. Norway is in fact the country outside the former Soviet Union that was the most

affected, and will continue to be the most affected, by the fallout from Chernobyl. In Valdres, there are many areas where the contamination varies between 1 and 10 curies per square kilometer.

Norway is also especially vulnerable because we use wilderness areas for grazing to such an extent. A survey done by the NHL and the Radiation Protection Agency in Ukraine showed that on land that is farmed, plowed, and fertilized, the absorption of radioactive materials in plants is less. The type of soil is also important; the contamination of organic soil (soil rich in humus) is the worst; radioactive particles are more permanent in clayey soil.

Get By Cheaply

By simply giving Berlin blue to domestic animals, absorption in meat and milk can thus be neutralized. The economic consequences are great. In Belarus alone, they would have to spend between 5 and 10 percent of the [gross] national product to neutralize the contamination; now they can get by with much less.

We are also doing that. If we had followed the international standards for the absorption of radioactive materials and not used any countermeasures, Norwegian agriculture would have lost between 1 and 2 billion kroner annually. Using Berlin blue, the radiation values are brought way down. Cost: around 100 million kroner.

The Norwegian research applies not just to reductions of absorption in animals. It also includes a project in which the aim is to study the mobility of radioactive materials in relation to the distance from a nuclear power plant where there have been emissions. The goal of this research is to learn more about what Norway could be exposed to if, for example, an accident were to occur at the Russian nuclear power plant on the Kola [Peninsula].

Eight Thousand Dead From Radiation

"We have seen many tears," said Vladimir Kholosha, the deputy minister at the Chernobyl ministry. "Tears because people had to leave their homes, tears because people died from minor illnesses. People's immune systems were so weakened by radiation that even 'innocuous' diseases have become life-threatening."

Today there is hardly anyone who has an overview of what effect the radiation from Chernobyl has had on public health. Kholosha confirmed that about 8,000 people have died, and that it was due to large doses of radioactivity. In early September, the Ukrainian national assembly, Verhovna Rada, approved a comprehensive program for the next two years and the period between now and the year 2000 to reduce the effects. But money is needed—scads of money—and Ukraine does not have it.

At the same time a major effort is under way, under the aegis, among others, of the UN and the EC, to survey public health conditions. A good six and one-half years after the accident, we are starting to see some of the consequences. In Ukraine and Belarus, infantile thyroid gland cancer has increased dramatically, a survey conducted by the World Health Organization, WHO, showed.

Since 1989, 225 new cases have been reported in Belarus, 157 in Ukraine. Normally there would only have been two to three cases.

Ukrainian experts also think they are seeing more deaths from other diseases, among others of the heart, blood vessels, and the circulatory system, but inasmuch as there are so many factors that influence the development of such diseases, at the moment it is too early to suggest any connection. Regardless—the national assembly, Verhovna Rada, certainly stands by what it said when it states that the Chernobyl accident “will be seen as the worst tragedy in 20th century Ukrainian history, and will affect the lives of several generations of people.”

Strange Evergreen Forest

The needles on the fir trees do not look like ordinary needles—even if they come from the common fir, *pinus silvestris*. They are in different sizes. Some are long, others are short, some are growing in loops. From every growth point, where normally five branches would grow, here between six and 20 grow. All the same, upon closer inspection, this green forest is not that normal.

“We can see changes in the pattern of growth,” said Andrei Arkhipov, one of the researchers at the center in Pripjat. “But it is impossible to see whether there are genetic changes; for that, we have to have several generations of trees. The green forest of firs was sown with seeds from those trees that received the greatest radiation damage in 1986, and turned red.”

Arkhipov is the son of Prof. Nikolai Arkhipov, one of Russia's greatest experts on the effects of radioactive contamination. For many years the elder Arkhipov conducted studies of the effects of the once unknown nuclear accident in Kyshtym in the Urals. Now the laboratory has been moved to Chernobyl.

The forest is just one of the research areas. In large greenhouses tests have been made on plants such as rape, lupine, oats, root crops, and vegetables to study the absorption of radioactive materials in the plants—and how this can be neutralized.

“The most effective countermeasure we have found to date is fertilization with potassium, which prevents the absorption of cesium. Applying lime is useful to reduce the absorption of strontium,” Arkhipov said. The center has extensively mapped the contaminated area, which shows a spotty pattern. In some places the fallout can be great, just as it can be practically free of radioactive materials. The main goal of this research is to see how agricultural areas can be reused after a nuclear accident.

Fivefold Acidity in Snow This Year in South

94WN0106B Oslo AFTENPOSTEN in Norwegian
4 Dec 93 p 3

[Article by Oivind Loraas: “Snow in South Norway Is Extremely Polluted”]

[Text] Grey-black snow has fallen over the southeastern part of Norway over the last few days. Pollution from England and East Europe has made the snow extremely acidic.

Tonsberg—The snow that fell over the southeastern part of the country earlier this week was extremely polluted. At the regional college at Bo in Telemark the pH value of the precipitation measured 3.4. The pH value shows how much acid there is in the water. The lower the number, the more acidic the water.

“We took a sample of the precipitation on Thursday [2 December], after personally observing how dirty-grey the snow was,” says teacher Synne Kleiven in the Department of Environment Protection at the regional college.

“The tests we made show that the pH value of the precipitation was 3.4. The normal pH value of precipitation over Telemark is 4.4. This means that the snow that fell this week is 10 times as polluted as normal. In a fishing lake anything alive will die long before the water becomes as acidic as the snow was this week.”

Kleiven says the water has been filtered and great quantities of soot particles have been found. “The filter we used became completely grey as we filtered the water,” she says. There is a layer in the snow almost 2 centimeters thick that is almost completely grey. We think this is the snow that fell the night before Wednesday.

“So far the pollution remains in the snow. The problem arises when the snow melts in spring. If this happens rapidly water and rivers will get an acidic pollution shock that might result in the death of fish and great damage to the environment,” says Kleiven.

The National Pollution Inspectorate (NPI) has also received reports about the extremely acidic precipitation.

“We received the statistics from some 30 measurements carried out by the Norwegian Institute of Atmospheric Research (NIAR) yesterday. The numbers show a concentration of acid that is up to five times the normal amount in the precipitation that fell this week,” Chief Engineer Tor Johannessen of NPI says.

“The measurements show a pH value ranging from 3.4 to 3.9 in the snow that fell last week. This is far below the normal value. The tests also show large concentrations of soot particles,” says Johannessen.

Johannessen says that the acidic precipitation has fallen all over the southeastern part of the country, from the Agder counties to as far north as Osen in Hedmark.

“Periods with an extreme amount of acidic precipitation are something that we experience from time to time,” he says. This is no acute crisis, but it might result in a large amount of local pollution when the snow melts. It might be especially bad if large amounts of acid collects in the snow during the winter.

The fact that there is so much soot in the snow indicates that the pollution is coming from East Europe where cleaning of emissions is quite poor. According to the Meteorological Institute the precipitation of the last few days has come from both the southeast and the southwest. This means that large amounts of pollutants have come down over Norway from both East Europe and England during the last days.

[Box, p 3]

This Is Acidic Precipitation

- Acidic precipitation is polluted snow or rain. It is first and foremost sulphur that pollutes, but there can also be large amounts of soot particles in the acidic precipitation.
- The pollution is coming from heat-generating stations and industries that use oil or coal as a source of energy. Sulphur is released into the air and then comes back down as sulfuric acid along with the precipitation.
- England, Germany, Russia, and the other countries in East Europe are the greatest users of coal and oil.
- The Agder counties and Telemark in particular have been hit by acidic precipitation, but such pollution has been registered as far north as Sogn and Fjordane.

Market Economy Cited in Decreased Kola Emissions

94WN0106Y Oslo *AFTENPOSTEN* in Norwegian
4 Dec 93 p 3

[Article by Ole Mathismoen: "Emissions From Kola Reduced"]

[Text] Emissions of sulphur at Kola have been strongly reduced since 1989. The reason for this is the gradual introduction of market forces into the Russian economy.

In 1990 about 550,000 tons of air pollution was emitted—mainly sulphur—from the metal industry at Kola. About half of this came from Pechenganikel at Nikel and Zapolyarnyy in the vicinity of the Norwegian border. How large the emissions will be this year nobody knows, but because of the much reduced industrial production they will be considerably lower. In August of this year the production at Nikel was 45.7 percent lower than in August of last year.

"During the last 20 years an incredible 9.6 million tons of sulphur dioxide have been emitted from the smelting works at Kola. The environmental destruction is enormous. Nobody should think that the problem has been solved even though market forces have taken a drastic bite out of this sulfuric hell," says Thomas Nilsen from Bellona.

Depression

In the mining and smelting cities on the Kola peninsula depression is spreading. Last Monday the labor office in the metal city of Monchegorsk issued the first official announcement from the large metal conglomerate that owns the smelting works: One thousand fifty people will be let go. Journalist Sergei Chukov from the newspaper MURMANSKII VESTIK thinks this is real. The workers will get the boot.

In Russian industry such mass layoffs are something new. Locally at Kola the announcement from Monchegorsk is only viewed as a confirmation that the smelting industry is having a difficult time.

Cutbacks

Prices for raw materials on the world market are low. Authorities in Moscow seem to have tightened up again on how much of their income the conglomerate might dispose of. Severonikel at Monchegorsk is struggling with sky-high debts owed to both the nuclear power plant at Kola and the Murmansk Shipping Company, which is hauling the ore from the Siberian city of Norilsk to the Kola works. There are rumors about layoffs of thousands of people both at Monchegorsk and at the metal companies at Nikel and Zapolyarnyy, which are owned by the sister company Pechenganikel.

Local sources describe the mood of the metal-producing cities as very depressed. Both at the metal works and at the nuclear power plant which supplies the industry with power, the workers presumably have not received full pay this fall. Previously the workers had contracts for five years or more. Now only a minority get a contract for more than a few months.

Even people with a solid knowledge of Russia have difficulty explaining what is really happening in northwest Russia. On the one hand their industry seems to be marked by depression, heavy debt in rubles, and rapidly falling production. But on the other hand more Russian nickel is being sold abroad than at any other time, and income in dollars is high.

Scientist Rune Castberg at the Fridtjof Nansen Institute is unsure whether what is happening at Kola is the result of a real economic crisis or whether the leadership has let the crisis run full course simply as a means of getting rid of superfluous employees.

Castberg has for years worked with the Kola problems. He does not think that market forces and the gradual economic freedom in Russia will result in a complete halt in pollution from Kola.

"Since the smelting works are there, it will benefit Russian society most to have as much activity there as possible. However, in the future production will to an increasing degree have to be profitable," Castberg says.

He thinks it probable that the part of the metal industry that is dependent on ore transported from Siberia will disappear, and that the smelting industry based on the local ore will remain. But even though some slight degree of modernization has taken place during the last decades, the technology and the buildings are mainly from the 1940's and 1950's. Whether the conglomerate can afford to modernize to the degree necessary to keep up production in the future without economic aid from abroad is unclear.

Skeptical of Support

Castberg is skeptical as to whether Norway should give 300 million kroner in support of modernizing the smelting industry in Nikel in order to reduce emissions further.

"I do not think this is the most efficient use of our money. We might rather help Pechenganikel achieve the full effect of the cleanup capabilities the company already has," Castberg says.

The point is really that the production at the metal works has been reduced more than the pollution. This means that the companies are unable to clean the waste gas as well as they have previously. One of the reasons is a strong reduction in the production of sulfuric acid.

SWEDEN

Sweden Helping in Effort To Clear Soviet Munitions

94WN0086A Stockholm SVENSKA DAGBLADET
in Swedish 12 Nov 93 p 10

[Article by Lars Porne: "Swedish Clearing of Russian Weapons"]

[Text] Before the Soviet occupation, there was a Swedish populace on the Estonian islands Stora Rago and Lilla Rago (Pakri Saar) off the naval base of Paldiski. Now that the Russians have gone home, these islands are not only devastated, but after decades as targets for firing and bombing practice, they are also strewn with unexploded shells.

The Royal Institute of Technology (KTH) in Stockholm is now heading a project to clear the islands of all unexploded material and to make them safe to live on.

Senior research engineer at KTH Bengt Grisell has just returned from Tallinn, where he met with Estonia's environment minister, the former environment minister, and the defense minister. He has brought home a basic agreement that goes beyond clearing the two Swedish islands.

"Other items include clearing unexploded shells and mines in the waters around the islands, finding and clearing mines off Tallinn, finding and measuring Soviet radioactive dumping sites, disarming and recycling the enormous supply of Russian mines, and training Estonians in these fields."

Money Lacking

It is only the money that is lacking and Grisell is now hoping for help from the Foreign Ministry.

"The Estonians see this as part of their democratization process," he said.

He has established cooperation with FMV [Defense Materiel Administration], the SIPRI [Stockholm International Peace Research Institute] peace research institute, and the military, which can supply the expertise. FMV has agreed to donate surplus explosives and the Defense Materiel Inspectorate has granted permission to ship these materials to Estonia.

The Russians have stockpiled and left behind thousands of mines on the island of Nargo (Naissaar) and the Estonian authorities fear the possible consequences of a forest fire.

"On Stora Rago the Russians have dug up the Swedish cemetery and plundered the graves. Bone fragments are lying around on the ground," said Grisell, who was there with his research ship Altair.

Russians Reveal Dumping

Plans are to make this ship base for the major clearing project.

"I also signed an agreement with the Russians during a visit to St. Petersburg. They promise to make available all the information they have on the dumping of ammunition in the water, for example. The fact is that we have better relations with the Russians in this area than the Estonians have," Grisell said.

It is urgent that Stora and Lilla Rago be cleared quickly, since the islands are attractive to tourists and vacationers, now that the Russians have left.

Grisell said that the clearing operation would be easier because the islands consist of limestone and most of the unexploded shells are clearly visible.

"The unexploded shells could be of interest to criminals who would want to recover the explosives."

Consequently, work to explode the unexploded shells must begin as soon as possible.

The Estonians want to recover the mines. They contain tons of TNT, an explosive that hardly has any civilian use. It can be burned, but that would produce extremely toxic nitrous gases.

One method is to melt the TNT out of the mines—it has a melting point of about 80 degrees—and then mix it with some other substance to render it inactive and to make it useful for civilian purposes.

"The Estonians want to develop their own expertise in the clearance and destruction of old munitions."

When the Russians leave Estonia at the beginning of next year they will leave behind large supplies of previously top-secret military equipment near Tallinn.

"We will be the first people in the world to enter depots of this type," Grisell said.

"The Estonians also want us to look at other sites, including the secret Loksa submarine base near Tallinn."

Radioactivity a Concern

One thing that concerns the Estonians deeply is that the Russians have dumped radioactive materials into the sea. Some of these dumping sites are marked on Russian nautical maps, while others are not.

As a result, Grisell will try to chart out the radioactive areas with the help of his research ship. This will require special equipment.

"We hope to begin in early spring, but we must come up with the money."

The Estonians have expressed the hope that this will proceed more rapidly than it has to date, since Swedish assistance has been bogged down in bureaucracy.

Pulp Industry Ahead of Schedule Reducing Emissions

94WN0107A Stockholm SVENSKA DAGBLADET
in Swedish 13 Nov 93 p 8

[Article by Hans Strandberg: "Chlorine Emissions Rapidly Reduced; 80-Percent Reduction in Four Years, 'Unrealistic' Demands Achieved"]

[Text] The Swedish timber industry's emission of environmentally harmful chlorine compounds has been reduced by a good 80 percent in just four years, despite continued high production. Environmental demands were met several years ahead of time, something that had earlier been regarded as unrealistic by the industry.

Deformed Fish

Emissions from long-lived organic chlorine compounds—including the very unfortunate dioxin—was one of the major environmental issues of the 1980's.

The most extreme sign of it was malformed, sometimes sterile, fish in the waters around pulp plants—where emission of bleaching agents was and is the largest source of pollution. But, there was also uneasiness concerning the more long-term accumulation of chlorine compounds on the sea floor, and in animals and people.

Society registered its concern—the government through tough environmental measures, consumers through boycotting chlorine-bleached diapers, coffee filters, and writing paper. Environmental correctness became a factor in competitiveness.

In 1988, the Riksdag set the goal of cutting emissions in half, corresponding to 1.8 kilograms of organically bound chlorine (measured by the so-called AOX [expansion unknown] method) per ton of pulp production. The effort to reach this level was to begin no later than 1992. The industry wanted more lenient standards and a longer time to fulfill them.

Alternative Chemicals

The reality was quite different, all the environmental goals were exceeded. The industrial average for 1992, according to the most recent report from the Swedish Environmental Agency, was approximately 0.6 kilograms AOX per ton of pulp, a reduction of 80 percent in four years.

"Yes, you are correct, it progressed very quickly—through rapid technical advancement and conversion to other bleaching chemicals. Above all, in the case of the most dangerous, long-lived compounds, including dioxin," said Erik Nystrom of the Swedish Environmental Agency.

The reason is due primarily to the fact that the old chlorine gas is no longer used as a bleaching agent. It has been replaced principally by chlorine dioxide, but also by chlorine-free alternatives such as hydrogen peroxide and ozone. Deformed pike are no longer to be found.

The political objective now is to reach levels by the year 2000 at which "the environment is not harmed at all."

Closed Systems

Are we perhaps already there?

"We don't know. There are those who believe that even today's chlorine content causes harm, if somewhat more diffuse, but there are also those who think the opposite. Even completely chlorine-free bleaching can cause certain problems, but we do not have sufficient knowledge," said Nystrom.

He feels that other emissions—metals, nutritive salts, lignin, resin acids—are now receiving greater emphasis and point to the next step, the "closed factory." Runoff water is returned to the factory and waste products can be readily controlled. This also saves energy.

"In three or four years, there is sure to be a number of factories with closed systems. It can be done with chlorine dioxide, but is technically simpler with ozone. Furthermore, the market is demanding ever more chlorine-free paper," said Nystrom.

Activists Criticize Government Environmental Protection Policy

94WN0107B Stockholm SVENSKA DAGBLADET
in Swedish 1 Dec 93 p 3

[Commentary by chairman and deputy chairman of Environmental Protection Association: "Government Lowers Ambitions for Environmental Protection"]

[Text] This policy harms nature and undermines the Swedish timber industry's export potential, Ulf von Sydow and Stefan Edman feel.

Logging in Njakafjall in Vilhelminas is finished for this year. The rich forest with its many threatened species continues to be harmed.

But Njakafjell is not a unique case, rather an example of a more general course of events. Every week reports reach us on how valuable nature around our country is being damaged—a result of an exceptionally weak environmental protection policy.

The government says that the responsibility for managing environmental protection in the forests lies with the timber industry. It is called "voluntary cooperation." Laws that provide effective protection (outside of preserves and national parks) consequently do not exist.

Often, fortunately, individual timberland owners do cooperate. But if voluntary cooperation is contingent upon owners receiving compensation for sparing a valuable wooded area, environmental protection is likely also to be forfeit. State provision for compensating infringement are small and do not go far.

The politicians' most important contribution is doubtless the clarity of their goals. The proposition on biological diversity, for example, states that "...the environmental objective should be given the same emphasis and significance as various economic considerations." The new forest protection law contains similar formulations on objectives.

Other environmental areas are rife with obligatory, sometimes costly, demands that require adjustment. The catalytic converter, for example, adds thousands of kronor to the price of a new car.

Disadvantaged Area

In the area of environmental protection, on the other hand, there are virtually no requirements. If a person wishes to protect the environment, that is fine, but if a person does not feel that he has the means or the interest, he can forego it.

The situation resembles conditions in the 1960's when industries were not obliged to defray environmental costs, rather they received state subsidies to deal with emissions.

The improvements that we have begun to notice with regard to forest management are important and positive, but they are not occurring because of legislation, but despite legislation. In reality, there is no environmental protection law worthy of the name.

A key problem is the regulations on compensation which were introduced in 1987.

—Before 1987, the extent of the demands regarding responsibility for the environment that society could make in connection with the felling of timber (sparing protected zones, old and dead trees, high brush, etc.) pertained to all of the affected property. After 1987, it pertained only to "the affected area of the property," that is, normally only the cutting area.

This modification meant that the responsibility on a daily basis for protecting nature during timber harvesting was dramatically reduced. But the resolution also opened the way for unwilling timberland owners to avoid the responsibility for protection by cleverly laying out their cutting area. A couple of these cases are pending in the courts.

—At the same time, a ceiling was introduced, which has been set after sentencing in a couple of cases at approximately 9,000 kronor (the equivalent of about 50 trees). The timberland owner need never suffer greater expense.

If society requests greater responsibility, the timberland owner—regardless of what natural asset is threatened—can either refuse to take on the responsibility or else, demand compensation. The already limited exigencies to take responsibility are thus set aside completely.

Hasty Compromise

The 1987 resolution was a hastily constructed compromise. The Social Democrats quite simply needed support in order to introduce plan and building laws. The consequences for environmental protection were not analyzed at all.

Since its enactment, the resolution has been criticized strongly, particularly by the Liberal Party, which had reservations from the start.

Thus it is the more surprising that the so-called Freedom and Rights Committee is now proposing that the somewhat scrambled Social Democratic-Center Party compromise be written into the Constitution and accorded the same status as the right to vote and freedom of the press!

Still stranger is the fact that neither the Left Party, the Social Democrats, nor the Liberal Party's committee members protested the suggestion! Did they not realize the consequences?

Clearly individual timberland owners should have the right to compensation in the case of a major infringement. But, at the same time, modern environmental thinking stipulates that each line of trade must be prepared to take economic responsibility for its effects on the environment.

We are convinced that most timberland owners agree with us that they must assume some fundamental, obligatory responsibility without compensation.

The current arrangement, in which the timber industry largely lacks legal (and thereby economic) responsibility for the environmental harm it perpetrates is unreasonable and benefits only the loggers who shirk their environmental responsibility.

If the proposal for a change in the Constitution is passed, it will exclude any possibility of creating modern conservation legislation. Do Olof Johansson, the Liberal Party, and the Social Democrats accept that? And where do the Christian Democrats stand on this?

At the same time, the government is on the verge of letting go of the most viable possibility for solving the need of new forest reserves. Sweden has, from the international perspective, protected a very small portion of its forested regions, only 0.5 percent below the reforestation limit.

To achieve the goal of protected biological diversity, on the order of 10 times as much forest area should be protected.

The need is greatest in south and central Sweden, but establishing large reserves in these parts is expensive, complicated, and time consuming, not least because of the extensive parceling of property.

One way to rapidly improve our situation is to transfer a portion of the still completely state-owned Domain AB to the Environmental Agency and reduce correspondingly the value of the company. Such a solution was discussed already when the Office of Domains was incorporated a couple of years ago, but was not utilized.

By allowing Domain/Assi [Swedish Forest Industries] to merge with the partly private NCB, the government is on the verge of blowing its unique opportunity of establishing the needed reserves in a single stroke. Has the trade minister thought of this?

Biotope Protection

A further step backwards is the government's application of so-called biotope protection that was intended to protect "certain smaller field and water areas (biotopes) that provide a habitat for endangered animals or plants or are otherwise especially deserving of protection." The protection was intended primarily to have an automatic, overall application.

The government has now determined that biotope protection should be implemented in a manner that completely waters down the Riksdag proposal:

—Protection for “habitats for endangered animal and plant species” will not be undertaken at all. Instead, there will be protection for a number of specified types of environment.

—Of the designated environments, there are only a few biotopes in logging areas that will be accorded automatic, overall protection.

Viewed in its entirety, this conservation policy means that the government has backed off from its previously established ambitions. The gap between political rhetoric and actual practice is widening.

This policy harms nature and also undermines the Swedish timber industry's opportunities in export markets. Credibility with regard to environmental efforts will be ever more important, and nothing would strengthen the Swedish timber industry's credibility more than a strong conservation legislation and an ambitious investment in additional nature reserves.

Goals for North Sea Pollution Called Impossible

94WN0111B Stockholm DAGENS NYHETER
in Swedish 6 Dec 93 p 6

[Article by Gosta Karlsson: “Environmental Goals Cannot Be Met”]

[Text] The attempts to reduce the overfertilization of the North Sea by 50 percent by the year 1995 will not be successful. None of the eight North Sea nations will be able to cut its nitrogen emissions in half, as was agreed on six years ago. The threat to the ecosystem of the sea will thus remain.

The environment and agriculture ministers of the countries know this as they meet in Copenhagen on 7-8 December in order to discuss the protection of the North Sea. And in their hands they will get a fresh report in which researchers warn against the damaging effects on the marine environment if the countries' governments do not in earnest begin to deal with the nitrogen and phosphorus emissions.

The rivers that flow into the North Sea are loaded with nitrogen compounds. According to the most recent calculations, about 1 million tons of nitrogen are added to the sea that way each year. Its origin is primarily commercial fertilizer in agriculture and wastewater; 75 percent of the “river nitrogen” comes from the Rhine and the Elbe.

Furthermore, each year the North Sea receives about 600,000 tons of nitrogen in the form of fallout from the atmosphere. Automobile traffic and industrial processes are the biggest sources here.

Overfertilizing

In the central North Sea airborne transportation of nitrogen plays a greater role than river transportation, and the fallout of ammonia and nitric oxides in this sea has turned out to be greater than previously calculated.

The addition of phosphates from the Rhine and Elbe is said to have decreased somewhat in recent years, but, at least as regards the Elbe, researchers are uncertain whether

this is the result of lower pollution or because the flow of water during the sampling period was lower than usual.

Thus, the overfertilization of the North Sea continues, despite the fact that at the Second North Sea Conference in London in 1987 the environment ministers of the affected countries agreed that nitrogen emissions must be reduced by 50 percent—from the 1985 level—by the year 1995. None of the countries will be able to meet that commitment.

The effects of the massive nitrogen flow is, among others, that the balance between a variety of plant plankton (algae) is disturbed. Certain species spread at the expense of others and also increase their production of toxic substances when the supply of nitrogen becomes too high. An example of this phenomenon is the catastrophic accumulation of toxic algae in Skagerrak and Kattegat in 1968.

At the Third North Sea Conference, in The Hague in 1990, heavy metals and organic environmental poisons such as dioxins and PCB's [polychlorinated biphenyl] were the principal theme. The ministers decided that the emissions of about 40 indicated substances were to be halved, here as well from the 1985 level, by 1995. The substances are given in a “blacklist.” Four of the substances, cadmium, mercury, lead, and dioxins, are to be reduced by 70 percent over the same period because of their toxicity in the environment, according to the decision in The Hague.

Uncertain

Just what will happen to that goal is uncertain, judging by the levels of substances found in the bottom sediments and organisms of the North Sea. The researchers are saying, somewhat vaguely, that the “emissions have decreased, rather than increased.” But even if the emissions have declined, it has still not had any impact on the North Sea. There, the levels of heavy metals and chloro-organic pollution are unchanged or even higher, in certain areas.

Footnote: The data on emissions are taken from the 1987 “Quality Status of the North Sea,” the most recent public report on the environmental condition of the North Sea. The data were submitted by the respective nations to an international research group, which has been given the task of following the development in the North Sea.

North Sea Polluted by Farm Fertilizer

94WN0111A Stockholm DAGENS NYHETER
in Swedish 9 Dec 93 p 14

[Article by Gosta Karlsson: “Emissions Must Be Cut in Half”]

[Text] Farmers in Scania and western Sweden can prepare themselves for stricter environmental demands in order to reduce nitrogen emissions from fertilizer handling. The requirements are coming as part of the agreement by the North Sea nations to reduce by half the leaking of nutrients into the sea by 1995.

The contribution by agriculture to the overfertilization of the sea became a controversial subject on Wednesday [8 December] at the ministerial meeting in Copenhagen on the nations' efforts to restore the ecological balance in the North Sea.

England and France refused to join an agreement that by 1990 [as published] or no later than 1992 [as published] agriculture must have switched to what is called balanced fertilization.

Exactly what such fertilization means has not been specified, but the purpose is to reduce the excess nutrient salts in the sea to a minimum. This goal is in line with the European Union's so-called nitrate directives, which take effect with the EEA [European Economic Area] agreement.

Overfertilization

As a foundation for the agreement in Copenhagen, each of the eight North Sea nations has indicated which areas are most sensitive to overfertilization. The excess nutrient salts cause abnormal algae growth and disturbs the entire marine ecosystem.

England regards itself as not having any problems of overfertilization at all along its coasts. As for the rest of the North Sea, the British Government believes that it could be a matter of "little bits here and there."

"We cannot sign a decision to solve a problem that does not exist," said Deputy Agriculture Minister Earl Howe, who headed the British delegation to the Copenhagen conference.

He also was not of the opinion that it has been scientifically proven that leakage of nutrient salts and pesticides from British agriculture can cross the North Sea and affect other countries' marine areas.

France admits that there is a transitional problem to deal with, but does not want to agree to a deadline for measures.

Reactionaries

Sweden's Agriculture Minister Karl Erik Olsson tells DAGENS NYHETER that on this point the British can only be described as "stubborn reactionaries" in environmental cooperation.

Karl Erik Olsson believes that Sweden, for its part, has a chance of being able to cut its nitrogen emissions in half by 1995 "or about then."

He reveals that he will shortly submit a proposal for stricter environmental requirements for the way Swedish farmers handle fertilizer.

"We must reduce emissions of ammonia to the air from fertilizer plants as well as the handling of the fertilizer in the fields. We can do this by, among other things, using better spreaders for liquid fertilizer and by mixing it into the soil faster."

The stricter requirements apply primarily to the farmers of southern and western Sweden.

Since, according to Karl Erik Olsson, this will mean expensive new investments by the farmer in new equipment, he promises a generous transition period before new regulations take effect.

Strong Words

At the conclusion of the Copenhagen conference with a news conference on Wednesday [8 December], Danish Environment Minister Svend Auken in harsh words condemned "the refusal by some large and prosperous industrial nations to deal with their wastewater treatment."

One-third of all the wastewater flowing into the North Sea is untreated. Svend Auken did not mention any countries by name, but it is well known that France, Belgium, and England are the principal ones.

Their wastewater contains very large amounts of by and large every environmental poison which affects the North Sea.

Discharge to the North Sea

Fertilizers and heavy metals that are brought with rivers to the North Sea. The figures refer to tons/year. France's contribution is missing from the statistics.

	Nitrogen	Phosphorus	Mercury	Cadmium	Copper	Lead	Zinc
Belgium	60,000	8,000	2	4	50	60	500
Denmark	40,000	5,000	0.5	1	16	10	100
Germany	260,000	20,000	16	14	400	250	3,000
Netherlands	530,000	44,000	7	25	650	325	4,000
Norway	90,000	6,000	0.5	1	100	20	400
Sweden	30,000	1,000	0	1	40	15	300
England	210,000	30,000	8	28	450	320	2,500
Also, it is calculated that the North Sea receives through dredging, waste sludge, and fallout from the air: (countries combined)	500,000	27,800	54	280	3,170	10,000	20,600

UNITED KINGDOM

UK Signs First Energy Agreement With Russia

BR1712142793 London Hermes Database in English
9 Dec 93

[Press release from the UK Department of the Environment: "Energy Efficiency First Signed by UK and Russia"]

[Text] An agreement that will take British energy efficiency expertise to Russia was signed today by Environment Secretary John Gummer and representatives of the Russian Federation.

It is the first time that a western country has signed such an agreement with Russia.

Speaking at the signing with Aleksander Kouzmitski, [name as received] Deputy Minister of Science and Technology, Mr Gummer said:

"I am delighted that the UK is at the forefront bringing the benefits of energy conservation to Russia and that my Department's Energy Efficiency Office has played a major role in making this possible. This country has companies that are the leading edge in this field and have much to offer."

"I warmly welcome this very practical sign of co-operation between our two countries which I hope will blossom further. Our companies can benefit through new trade opportunities while the people of Russia will have warm, but energy efficient homes."

"All energy conservation is good for the planet. The more energy efficient Russia can become the better it is for everyone as pollution is reduced and fuel saved."

Through the United Nations Economic Commission for Europe Energy Committee's Energy Efficiency 2000 programme demonstration projects are being set up in Eastern Europe including Russia.

British companies including Rolls Royce are interested in taking part in a scheme aimed at improving energy efficiency in 10,000 Moscow flats owned by Gasprom, the Russian gas company.

As the projects are established it is hoped their ideas will spread throughout the country offering increasing business opportunities to British companies. The improvements would be paid for from the saving in energy bills.

Note to Editors

Also present at the signing at the Department of the Environment in Marsham Street was Mr Boris Pamkin, Russian Ambassador, and representatives of Rolls Royce, March Consulting Group, the United Nations Economic Commission for Europe, the Russian Federation, the Foreign and Commonwealth office and the Department of the Environment's Energy Efficiency Office. Press Enquiries: 071 276 0929 (Out of Hours: 071 873 1966) Public Enquiries Unit: 071 276 0900

WWF, Greenpeace Condemn GATT's Environmental Implications

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[Text] Geneva, Dec 13 (AFP)—Greenpeace and the World Wide Fund for Nature (WWF) on Wednesday [day as received] condemned the GATT talks nearing their finale here, saying that negotiators had completely ignored vital environmental issues.

"The GATT as it stands right now seems to have a trade-at-all-costs attitude," Greenpeace said while the WWF attacked the proposed Multilateral Trade Organisation (MTO) that will administer the GATT agreement.

"The MTO will have the power to override national laws on environmental protection, health and safety," WWF director Gordon Shepherd said.

"Uruguay Round drafts show that trade negotiators have failed even to establish a trade and environment committee within the proposed MTO," he said.

Charles Arden-Clarke of Greenpeace said that by ignoring the environment the credibility of the MTO had been damaged before its inception "at a time when the environment and sustainable development are at the top of the international political agenda."

Representatives from 115 nations are meeting here in an attempt to end the Uruguay Round of talks under the General Agreement on Tariffs and Trade.

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